ESSAYS

BY

HENRY THOMAS BUCKLE,

AUTHOR OF

"A HISTORY OF CIVILIZATION IN ENGLAND."

WITH A

BIOGRAPHICAL SKETCH OF THE AUTHOR.

ILLUSTRATED WITH A PHOTOGRAPHIC PORTRAIT.

NEW YORK:
D. APPLETON AND COMPANY,
443 & 445 BROADWAY.
1863.

CONTENTS.

BIOGRAPHICAL SKETCH

OF

HENRY THOMAS BUCKLE.

BIOGRAPHICAL SKETCH OF HENRY THOMAS BUCKLE.

In the year 1485 there appeared in Florence a young man who, from his illustrious birth and his natural endowments, would have attracted notice in any city, but whom that city of academies and home of the learned welcomed with instant wonder and applause. He was the most various, if not the most profound, scholar of his time. At the age of sixteen he ranked among the foremost canonists of Bologna. In the next six years he had ranged through all the circles of ancient and scholastic philosophy, and had explored the recesses of Jewish Cabbalism. His Latin compositions reflected the image of the Augustan age; his Italian verses delighted at once the Court of the Medici and the people in the streets. In his twenty-third year he propounded at Rome

nine hundred theses or questions, upon every one of which he offered to dispute with any opponent. In these questions he embraced every department of knowledge, as knowledge then was—metaphysics and ethics, theology and law, magic and mathematics. Of this challenge the issue is imperfectly recorded, but it at least alarmed the Church, since two Popes were constrained to protect the challenger with their sacerdotal purple. His projects were even more vast than his performances. He aimed at reconciling with one another all the systems of philosophy, from the days of the Athenian Sophists to those of the medieval doctors. He aspired to defend Christianity against every class of heretics and infidels—against the Greek Church on the one hand, and the colleges of Cordova and Bagdad on the other. He meditated an allegorical commentary on the Scriptures, and even with greater hardihood a scheme that by the force of mere syllogisms should compel all men to be of one mind in religion. Of labours so unintermitted, an early death was almost the inevitable result, and Giovanni Pico di Mirandula—'the phœnix of his age,' as he was called by his con-

temporaries—was cut off by a fever in his thirty-first year.

With this universal student we are about to contrast a modern writer who, within the last few years, has achieved as sudden and nearly as extraordinary a reputation. The difference of the times in which they wrote is reflected in the different character of their works. The objects to which the Italian devoted himself comprised the learning and science of his time, and with that time they have for the most part passed away. The studies of the Englishman, embracing as wide a circle, have in them the seeds of greater permanence, inasmuch as they relate to the perpetual interests and not to the transient theories and opinions of mankind. In these respects these accomplished men resembled each other. Both of them had conceived the idea of a vast, perhaps an impracticable work; and each had scarcely passed its portal when he was summoned to rest from his labours.

Henry Thomas Buckle expired at Damascus on the last day of May in the present year. That they have been born and have died, is record enough for the greater portion of

mankind; and it is well when the interval between birth and death affords no materials for censure or compassion. But, in the present instance, a laborious life and lofty aims establish a claim to a register of greater length. There has passed away from the world one of the heroes, if not one of the martyrs, of learning.

The claim is the more remarkable from its resting on no public services—unless, indeed, we account as such the conception and partial execution of an arduous and original work—on no official distinctions. Mr. Buckle was a man who trod in no one of the paths which confer early honours, and receive the sanction of the world. He was not, like Tweddell or Kirke White, 'the young Lycidas' of a university upon whose bier scholars strewed Greek and Latin elegies; nor, like Shelley, a brilliant meteor of the poetical firmament; nor, like Henry Martyn, the pioneer of a Church in 'perilous lands forlorn;' nor, like Francis Horner, a statesman struck down on the threshold of a political career. Mr. Buckle was no one of these; and yet the announcement of his death has cast a shadow

upon many who knew him only as an indefatigable wooer of knowledge, a bold explorer in the regions of historical and social science.

His life, so far as regards the world, was uneventful. He was the son of a London merchant. He was born at Lee, in Kent, November 24th, 1822. He was placed at an early age at Gordon-house, Kentish Town, where, under the training of Dr. J. T. Hollo-way, he rapidly gained distinction. The instinct for self-education was, however, strong, and indeed irresistible, in him. Having gained a prize for mathematics, and being desired by his parents to name his own additional reward, he claimed the privilege of being removed from school, and receiving thenceforth his education at home. When he made this unusual request, he was in his fourteenth year. We have not the means of determining whether his parents were rash or discreet in granting it. Mr. Buckle, however, was either dissatisfied with his instructors, or resolved to be the sole architect of his own mind. His tutors were dismissed; and he, a boy of fourteen years, set forth without a pilot upon the sea of knowledge. In about

four years his multifarious studies began to converge towards one focus—the intellectual progress and civilization of mankind. As soon as the idea of such a work presented itself distinctly to him, its fulfilment became the object of his life. Twenty years of labour, with scarcely an interval of rest, were devoted to it. On this method of study, or the merit of his book, we shall express some opinion presently: the book itself must always be regarded as an extraordinary proof of a mind at once sanguine and persevering. As he rejected the assistance of masters in language or science, so he declined following the mercantile business he might have inherited from his father. In the good London merchant, who can scarcely be supposed to have watched without some misgivings his son's independent course, we are reminded of the lenient and trustful father of John Milton. He, too, permitted his studious son, after a university career of signal promise, to devote himself to 'a ceaseless round of study and reading;' nor did he require him to enter a profession by which the cost of his education might be reimbursed. Till Milton was over thirty-two

years of age, he did not earn a single penny for himself, and afterwards he travelled in France and Italy, also at the paternal expense, for a year and three months.

From such care for the morrow as would have interrupted his daily studies, Mr. Buckle was happily released by his father's liberality; and by his death, in 1840, he came into possession of a handsome competence, of wealth, indeed, to one whose sole expenditure was upon books. These gradually lined the walls of his upper and lower chambers, and even his out-buildings were turned into libraries. If he kept a journal in any degree commensurate with his commonplace-books, we may one day learn how often he withstood the temptation to rush into print: how often he experienced the feeling inseparable from the composition of a great work, that he was farther from the beginning, and still but little nearer the end. It is recorded of the first explorers of the Amazon and Orinoco, that after voyaging for weeks amid the primeval forests and far-stretching savannahs that embank these rivers, each time that the mighty flood spread itself into some gigantic basin or lagoon, the weary and won-

dering adventurers deemed that they had at last reached the terminus of the ocean; nor was it until the waters again narrowed their course, and ran once more under overshadowing trees, and with an accelerated current, that they discovered their real bourne to be still remote. So it is with adventurers on the great tributaries of the ocean of knowledge: the fountain-heads of the stream lie far beyond the eastern horizon; but the time which marks the westering sun still lies far beyond the anxious gaze of the voyager. Mr. Buckle, 'taking not rest, making not haste,' in the year 1857—that is to say, about twenty years after the idea of a History of Human Progress in England first dawned upon him—committed the result of his steady ten-hours-a-day labour to the press, and followed the first volume with a second, published in 1861. The former of these volumes was at first received with indifference, but it speedily aroused curiosity, and next no small degree of indignation and alarm. The second was more coolly welcomed in England, and deeply resented in Scotland. 'An author,' says Gibbon, speaking of the reception of the second and third volumes of

the *Decline and Fall*, 'who cannot ascend will always appear to sink; envy was now prepared for my reception, and the zeal of my religious, was fortified by the motives of my political, enemies.' Mr. Buckle had assailed more than one order of mankind: the political economist and the lawyer have, perhaps, long since ceased to resent, but the Scotch are not likely to forget, nor are the clergy prone to forgive, such an antagonist.

The former of these volumes has this expressive inscription: 'To my mother I dedicate this, the first volume of my first work:' the second is dedicated to her 'memory.' With many readers the author has doubtless passed for a hard man, dealing with men's actions and thoughts as with so many links in the chain of causation, with the aspects of life as the mere products or phenomena of Fate or Necessity. In these inscriptions the rock is smitten, and the waters of love well freely forth. In this excellent mother, were centered the writer's affections: to her the philosopher became as a little child; for her the soul that dwelt apart, reserved the treasures of his faith and love. Her death, and,

we believe, the harbingers of that death—long bodily and mental decay were most painful to witness—prostrated her son, already enfeebled in body by the unceasing strain of his mind. His body he from earliest youth had treated as a slave, his mind as a sovereign: for the one no sacrifice was too great; for the other, no privations were thought excessive. It is in vain to inquire whether the usual sports of boyhood, and the manly exercises that prevail at our universities, might not have corroborated his physical, without any sacrifice of his mental, powers. Labour and sorrow had, however, done their work; and leisure and foreign travel came too late to relieve his enfeebled forces.

In this life, uneventful as it was, we have a very rare example of devotion to a fixed object, dating from a period at which literary plans are mostly dreams or

> Like the borealis race,
> That flit ere you can point their place.

The pages which he gave to the world, as well as those which remained to be written, were planned by him at a time of life when to most men study is irksome; and even to the

few who conquer indolence, is either a means to an immediate end, or a stepping-stone to wealth or worldly position. With powers that might have won for him the highest university honours, he turned aside from that near goal, and set before him one which he might never reach at all, and which it was not destined for him fully to embrace. Nor does it lessen the merit of his devotion to study, that circumstances relieved him from caring too much for the morrow. Competence, no less than wealth, is often a hindrance to continuous labour. He whose bread is provided for him is too apt to say, with Rasselas, that 'the deficiencies of the present day will be supplied by the morrow;' that he is not an athlete to whom every moment is precious. But none of these Siren voices had charms for the ear of HENRY THOMAS BUCKLE: and he steered by the fatal island where so much of youth—'Youth on the prow and Pleasure at the helm'—has wrecked the hopes of life. In more than one memorable passage Cicero has put on record his own early diligence; and we still read with pleasure the honest pride with which he recounts how he 'scorned

delights, and lived laborious days'—how he, a *novus homo*, raised himself to the ivory chair of high-born Fabii and Manlii. Many records, also, have we of men to whom to study was to be happy—by whom a day spent in what Ben Jonson calls 'the cold business of life'—its ceremonies, holidays, and amusements—was reckoned a day lost. Isaac Casaubon's *Ephemerides* are full of lamentations for hours wasted on friends, kinsfolk, and acquaintance, instead of being turned to profit on Athenæus or Polybius. Adrien Baillet destroyed by intemperance in study the frail body that nature had bestowed on him. Robert Southey set a noble example to all who adopt the vocation of the scholar: the days of Immanuel Kant certified to each other of the duties and pleasures of the philosopher; and the elder Pliny, both by his life and death, merited a name among the martyrs of science. But none of these earnest students surpassed Mr. Buckle in firmness of purpose or diligence in business. He discerned, or at least he imagined, that a great void in the history of human progress awaited the filling-up: and however opinions may vary upon his fitness

for his self-imposed task, there can be no question of the ardour and sincerity he brought to its performance.

His recluse life entailed upon his writings some serious disadvantages. The ingenuous arts are not more effectual in softening men's manners than intercourse with society. If from his 'study' he did not 'rail at human kind,' he formed, from his long commerce with books alone, harsh and one-sided opinions of classes, that earlier and more free intermixture with them would have softened or corrected. Of the clergy he saw only one, and that not the more favourable side. He regarded them as writers or preachers alone, and not as active and humanizing elements in society. He is right in ascribing to dogmatic theology, dark, cruel, ignorant and groundless theories, alike at variance with a divine Author and dishonourable to human nature. He is wrong when he represents the orator in the pulpit, or the scholar in the closet, as hard, bigoted, and severe as his doctrines. In the *Confessions of Augustine* we have the outpourings of a large and liberal heart: in his writings on Fate, Free Will, and Fore-knowledge, he appears

only as the *durus pater infantium*, the precursor of the implacable and gloomy Calvin. That the nature of Luther was more harmoniously toned with nature and man than the nature of Erasmus, their writings do not permit us to doubt: but when Luther puts forth on the dark sea of theological speculation, he becomes, like his Genevan rival and contemporary, stern, acrid, and rancorous. The most earnest and tender of philanthropists, a Penn or a Howard, was not more deeply imbued with the love of mankind, than were Richard Hooker and Jeremy Taylor: yet it would not be difficult to extract from their books passages that, taken apart from the context, are equally shocking to our reason and affections. The extracts from the Scotch divines that fill so large a space in the notes of Mr. Buckle's second volume, are atrocious enough to prove that Torquemada and St. Dominic were not better disposed to rack and burn their fellow men, than were the Gillespies, the Guthries, the Halyburtons, and the Rutherfords, on some of whom Milton had already fixed the brand that 'new *presbyter* is but old *priest* writ large.' Yet, perhaps, many of these fiery

tongues belonged to men abounding with active charities and sympathies, and illustrating by their lives the doctrines of peace and good will. Again, in his strictures on national character, Mr. Buckle employs an intellectual standard only. The moral compensations for imperfect knowledge and progress, he ignores or overlooks. His eye, directed to scientific progress alone, saw not many fertile spots that relieve even the barrenness between Dan and Beersheba.

On various occasions, Mr. Buckle denounced the effects of seclusion and separation from human interests upon the monastic orders and the priesthood generally. He unconsciously partook of the mischief which he denounced. More acquaintance with practical life would have softened his asperities, and saved him from some hasty conclusions and even grave errors. One effect, indeed, of isolation which appears in the studious and solitary Benedictines, did not manifest itself in him. His heart was not closed nor narrowed to the great interests of his kind. He may have weighed classes of them in an ill-adjusted balance, but to the progress of men in what-

soever delivers the human race from bondage to idols of the market, of the temple, or the tribe, he was never indifferent. In the cause of what he believed to be civilization, his energy was unflagging, his sympathy intense. Of the plan and execution of his *History* we are not in a condition to speak; we have portions only of the Introduction to it. Much that in the Prolegomena is incomplete or inaccurate, crude or rash, would probably, after maturer experience and enlarged insight, have been supplied or corrected in the historical sequel. The following remarks accordingly have reference to the fragment alone of his scheme.

First, the subject to which he devoted his life is vague. The term Civilization has a specious sound and a noble bearing; but objections to it instantly present themselves when we begin to ask its precise import. Can a History of Civilization, even in any one country, France or England, be comprised, like the *Esprit des Lois* or the *Politics* of Aristotle, within scientific limits? Does the term admit of definition? Is it, in fact, more than a generality, coming under the legal ban

of '*Totus in omnibus nullus in singulis*'? One writer on such a theme might choose to regard civilization as the greatest happiness of the greatest number—that is, sufficient beef, pudding, shelter, and wages; another might allege that man, not living by bread alone, requires, before he is civilized, a church establishment in prime condition; a third will say that neither the labour-market nor the meat-market, nor deans and chapters, and lawn sleeves alone make men happy and keep them so; but that this boon must be expected from free trade, universal suffrage, and lightness of taxation. Jean Jacque sends us back to the time

> When wild in woods the noble savage ran;

and William Penn and John Bright look forward to the day when none shall refuse their cheek to the smiter.

Again, conceding for the moment, that the term civilization is sufficiently intelligible, if not very precise, Mr. Buckle's manner of handling the subject is somewhat capricious and irregular. In history, we expect that the events recorded shall follow one another in the order of time, or if they depart from it

and assume the order of space, that there shall be good reason for moving on parallel instead of direct lines. Gibbon was justified in leaving the main course of his narrative for such episodes as his chapters on the Northern nations, on the Monastic orders, or the rise and progress of Mohammedanism; since the assaults of barbarians, the withdrawing from active life of so many thousands of able-bodied men, and the birth of a new and aggressive faith, were so many combined and collateral elements of the decline and fall of Rome. Montesquieu, again, was warranted in passing from China to Peru in search of analogies with the laws of Europe, or of examples of institutions unknown or alien to the western world. But the civilization of a single country does not admit of so devious a course. We require to have placed before us in their known succession each wave of the civilizing stream, to have marked out for us the effects of its spring and neap tides, and the several deposits which remain after the flood has subsided. Possibly—indeed most probably—this defect in the Introduction would have been corrected in the work to

which the two volumes before are merely the porch; but even the porch is irregularly built. Its foundation-stones are properly the universal questions of the food, climate, and physical circumstances that have attracted men to certain centres, or propelled them from those centres, or affected by various causes—abundance, privation, the possession of ease, or the necessity for toil—their forms of government and their habits of life. When, however, we expect to pass from the *incunabula* of society to its earlier phases, we are suddenly transported to the history or the preliminaries of the English Revolution of 1640, and the French Revolution of 1789—crises in history, indeed, which mark beyond any others a new birth in each of the respective nations, but which belong to advanced and not to incepting civilization. These objections, however, apply to the first volume especially; the second, being devoted to two opposite phases of religion, although, as regards a History of Civilization, its topics are somewhat premature, is the more coherent of the two, both in respect of its premises and its conclusions. The second volume is, in fact, little more than

an episode of the first; with a few inconsiderable changes, it might have stood alone as a record of the effects of perverted religion in Spain or Scotland. The discrepancies and inconveniences attendant on the vagueness of the term civilization might, in our opinion, have been avoided, had the work been entitled a 'History of the Aspects of Society in England.' There would then have been no previous question about the import of a title sufficiently elastic to include the era when Britons painted their bodies with woad, and the era when they assumed trousers and paletots. The presentation of such *aspects* might have shifted without detriment to the work or inconvenience to the readers of it from direct to parallel lines, while the progress of civilization might have been traced or implied with equal, if not superior effect. The great bases of civilization—religion, law, commerce, arts and learning, with their several products and phenomena, and their mutual co-operation and counteraction—might have been exhibited in a series of osculating or concentric circles, while the laws of their generation or connexion would have appro-

priately formed, in Mr. Buckle's hands—and none were more able to supply it—a superb peroration.

From what appear to us defects in the structure, we turn with pleasure to the sterling merits of the *History of Civilization.* As to its language, too much praise can hardly be awarded to it. It is equal to the subject, precise enough for the demands of science, full, flowing, and flexible enough for every purpose of eloquence. Lucid, when the business of the writer is to state, explain, or illustrate, it ascends, when anger at the oppressor or sympathy with the oppressed calls upon it, to notes worthy of Edmund Burke himself, denouncing the corruptions of England or the wrongs of India. Nor was such facility or such strength attained by a long apprenticeship in writing. Until 1857, when the first of these volumes was published, we believe that Mr. Buckle had not printed a line; nor, with the exception of a lecture delivered at the Royal Institution in March, 1858, and an essay or two in Fraser's Magazine, did he permit fugitive literature to interfere with the great task he had in hand His was the rare art of making immense reading subservient to

general instruction. The abundance of his materials neither perplexed nor burdened him; the accumulated thoughts of others abated no jot from the freshness of his own. No sources of information were too mean, devious, or recondite for his searching gaze. His command of ancient and modern languages, his bibliographical knowledge, were not less remarkable than Gibbon's or Southey's. Like theirs, his commonplace-books were well-ordered arsenals which yielded without stint or confusion the weapons and munitions required by him.

Of the duties and the province of the historian, he formed a conception most difficult, perhaps impossible, to realize; but it was noble in itself, and honourable to him. He perceived that history in its best forms is but an imperfect record of the thoughts and deeds of men. The writers of it, even those whose works are possessions for ever, select some particular crisis, or some exceptional phase: a great war, a single revolution, a long series of national events, or periods of time in which long hostile or distant streams of action are forcibly or spontaneously diverted into a com-

mon channel. Of all narratives, none equal in their comprehensive character those of Herodotus and Gibbon. The one opens with that cycle of events which committed together for centuries of strife Western Asia and Eastern Europe. The other begins with the breaking up of an empire which had slowly conquered and long held together with links of iron the civilized world. With Cyrus commences that fusion of the hill tribes with the dwellers in the plains that ended in the construction of the Great King's empire, 'a mighty maze' of satrapies, each one in its dimensions a kingdom, 'but not without a plan.' Then was put in act what was foreshadowed in the ten-years' siege of Troy, that mighty duel of opposing continents which was not destined to end before Rome asserted at Actium the predominance of Europe over Asia. The rolling together and condensing of races by Cyrus is one *terminus* of the series, the great Actian triumph was the other. With Commodus, on the other hand, the curtain of history rises on the drama of dismemberment, and proceeds from act to act, until an unarmed priest fills the throne of the western Cæsars, and an infidel

rides unchallenged through the Hippodrome of Constantinople, or profanes the great church in which Basil and Chrysostom preached. The latter is Gibbon's cycle, the former that of Herodotus and of those who continued his record of three of the empires of prophetic vision.

But in these and in other narratives certain elements are wanting, and Mr. Buckle, though not the first to perceive the defect, was among the first who attempted to supply it. War and peace, law and religion, forms of government, art, literature, and manners, are merely phenomena of national life, and presuppose the existence of laws which actuate and of conditions which shape and control them. It was Mr. Buckle's object to collect and place these phenomena upon a scientific basis, to discover the law of their growth, progress, and decline, to show why on some soils they withered, why on others they bore fruit an hundred-fold. How far he failed or how far he succeeded in his attempt to construct a science of history, we do not pretend to determine: we are merely pointing to the high and arduous object he set before himself.

Secondly, he sinned the sin of excessive

generalization. It may be true that in certain cycles or shorter periods of time the sums of human acts are strangely alike. It may be true also that statistics afford to history one of its most sure and instructive auxiliaries. But it is no less certain that such tabular records are not only in their infancy, but as regards former times, either do not exist, or are most scanty and precarious aids to truth. At the best, also, they represent a few only of the elements of social life, and probably centuries of exact observation must elapse before they can be permitted to supersede the other grounds, moral, intellectual, and religious, on which history hitherto has been constructed. In his anxiety, if not indeed his determination, to find a comprehensive idea, Mr. Buckle often strains, if he does not misrepresent facts. He is too prone to assume that men under similar circumstances will be similar themselves, and leaves scarcely a margin for the disturbances of passion, custom, or accident. Comets are tolerably regular in their paths; but Whartons are far from being plain in their motives or actions; and if fashion be very potent, and

> Lucullus, when frugality could charm,
> Had roasted turnips on his Sabine farm,

yet it is unsafe to compute how many Lucullises are due at one period, or whether 'adust complexion' or other causes invariably compel

> Charles to the convent, Philip to the field.

We might proceed to specify other instances in which the wide grasp of Mr. Buckle's theory defeats its own purpose, and leaves us disposed rather to abide by imperfect light than to follow a possible meteor. But we must abstain from comment on its merits and defects alike, and hasten to the conclusion. We cannot, however, entirely omit mentioning Mr. Buckle's conversational qualities. He was not a sayer of smart or brilliant things: indeed, wit and humour were not among his gifts. He was no granter of propositions; nor, had his conversations been reported, would his periods have been found to flow into the smooth and regular moulds of the late Lord Macaulay's social discourse. His voice was unmusical and his manner rather defiant. But one could not be five minutes in a room with him without being aware that a talker unusually

informed with book knowledge was present. From the news of the morning to the most recondite and curious recesses of learning, Mr. Buckle ranged freely; the topics of the day furnishing him with a wide round of illustration and analogy, and not unfrequently with hardy speculations on the future. As, however, he mixed more with his fellow men, the current of his conversation considerably abated in its volume. He grew more willing to listen, less disposed to controversy or to monologue. The softening effect of increased intercourse with society, as it appeared in his conversation, so would very probably have gradually influenced the dogmatic and paradoxical tone of his writings.

That the *History of Civilization in England* should have excited some angry surprises, if not a deep feeling of indignation, in many quarters, it was natural to expect. The doctrines of Auguste Comte are not palatable on this side of the Channel; and although Mr. Buckle accepted M. Comte's creed with reservation, he is indebted to it for some of his theories. He thus ran counter to an order of men not indisposed to quarrel among themselves, as the

Court of Arches can at this moment testify, but which, as soon as its conventional opinions are attacked, forms a compact phalanx for its corporate defence. 'The Highlanders,' says Baillie Jarvie, 'may give each other an ill name and even a slash with a claymore, but in the end they are sure to join against all cee-velised persons who have money in their purses and breeks on their hinder ends.' Equally sure were Mr. Buckle's strictures on the Kirk and Predestination to draw down upon him the wrath of North Britain. Hero-worshippers, again, have no reason to be pleased with his speculations, since he resolves the course of history into cycles and a system, and ascribes but little permanent influence to individual soldiers, statesmen, or saints. Gibbon nettled the ecclesiastical body more by his innendoes than by his direct imputations. Mr. Buckle fights against it, not with the foil of irony, but with the whole armoury of distrust and defiance. Some of the castigation he got, he merited: for some of his charges were ill considered and unfounded; but these, the faults of seclusion and inexperience, do not, in the main, affect his assertion, that no class of men is fit to be

entrusted with irresponsible power, and of all classes, the clergy least.

This, however, is not the place, even did our limits allow of it, for analysing Mr. Buckle's work. That has been done by other hands at a more convenient season. We have sought, in this slight sketch of him, to delineate the author, and not his book. That the latter will remain a fragment is probable—neither the man nor the circumstances which favoured or hindered it are likely soon to recur. 'Dat Galenus opes, dat Justinianus honores:' we are not likely again to see so much learning and ability employed upon themes which remunerate the student with neither present profit nor honour. Be what they may the faults of the book, the merits of the author are sterling. He sought knowledge for its own sake: for knowledge he gave up his youth, his talents, his fortune, and possibly his life. Truisms did not deter, nor shadows intimidate him; whatever, in his judgment, had hitherto retarded, or was likely to retard in future, the progress of men, he denounced; whatever, in his opinion, was likely to accelerate or secure it, he advocated. If we cannot inscribe it on the roll

of historians or philosophers of the highest order, yet the name of HENRY THOMAS BUCKLE merits a high place on the list of earnest seekers for Truth.

MILL ON LIBERTY.

MILL ON LIBERTY.*

If a jury of the greatest European thinkers were to be impannelled, and were directed to declare by their verdict who, among our living writers, had done most for the advance of knowledge, they could hardly hesitate in pronouncing the name of John Stuart Mill. Nor can we doubt that posterity would ratify their decision. No other man has dealt with so many problems of equal importance, and yet of equal complexity. The questions which he has investigated, concern, on the one hand, the practical interests of every member of society, and, on the other hand, the subtlest and most hidden operations of the human mind. Although he touches the surface, he also penetrates the centre. Between

* *On Liberty.* By John Stuart Mill. London: John W. Parker and Son, West Strand. 1859.

those extremes, lie innumerable subjects which he has explored, always with great ability, often with signal success. On these topics, whether practical or speculative, his authority is constantly evoked; and his conclusions are adopted by many who are unable to follow the arguments by which the conclusions are justified. Other men we have, remarkable for their depth of thought; and others again who are remarkable for the utility of their suggestions. But the peculiarity of Mr. Mill is, that both these qualities are more effectively combined by him than by any one else of the present day. Hence it is, that he is as skilful in tracing the operation of general causes, as in foreseeing the result of particular measures. And hence, too, his influence is far greater than would otherwise be possible; since he not only appeals to a wider range of interests than any living writer can do, but by his mastery over special and practical details, he is able to show that principles, however refined they appear, and however far removed from ordinary apprehension, may be enforced, without so dangerous a disturbance of social arrangements, and without so great a sacrifice of existing insti-

tutions, as might at first sight be supposed. By this means he has often disarmed hostility, and has induced practical men to accept conclusions on practical grounds, to which no force of scientific argument, and no amount of scientific proof would have persuaded them to yield. Securing by one process the assent of speculative thinkers, and securing by another process the assent of working politicians, he operates on the two extremes of life, and exhibits the singular spectacle of one of the most daring and original philosophers in Europe, winning the applause of not a few mere legislators and statesmen who are indifferent to his higher generalizations, and who, confining themselves to their own craft, are incapable of soaring beyond the safe and limited routine of ordinary experience.

This has increased his influence in more ways than one. For, it is extremely rare to meet with a man who excels both in practice and in speculation; and it is by no means common to meet with one who desires to do so. Between these two forms of excellence, there is not only a difference, there is also an opposition. Practice aims at what is imme-

diate; speculation at what is remote. The first investigates small and special causes; the other investigates large and general causes. In practical life, the wisest and soundest men avoid speculation, and ensure success because by limiting their range, they increase the tenacity with which they grasp events; while in speculative life the course is exactly the reverse, since in that department the greater the range the greater the command, and the object of the philosopher is to have as large a generalization as possible; in other words, to rise as high as he can above the phenomena with which he is concerned. The truth I apprehend to be that the immediate effect of any act is usually determined by causes peculiar to that act, and which, as it were, lie within it; while the remote effect of the same act is governed by causes lying out of the act; that is, by the general condition of the surrounding circumstances. Special causes produce their effect quickly; but to bring general causes into play, we require not only width of surface but also length of time. If, for instance, a man living under a cruel despotism were to inflict a fatal blow upon the despot, the im-

mediate result—namely, the death of the tyrant—would be caused solely by circumstances peculiar to the action, such as the sharpness of the weapon, the precision of the aim, and the part that was wounded. But the remote result—that is, the removal, not of the despot but of the despotism—would be governed by circumstances external to the particular act, and would depend upon whether or not the country was fit for liberty, since if the country were unfit, another despot would be sure to arise, and another despotism be established. To a philosophic mind the actions of an individual count for little; to a practical mind they are everything. Whoever is accustomed to generalize, smiles within himself when he hears that Luther brought about the Reformation; that Bacon overthrew the ancient philosophy; that William III. saved our liberties; that Romilly humanized our penal code; that Clarkson and Wilberforce destroyed slavery; and that Grey and Brougham gave us Reform. He smiles at such assertions, because he knows full well that such men, useful as they were, are only to be regarded as tools by which that work was done, which

the force and accumulation of preceding circumstances had determined should be done. They were good instruments; sharp and serviceable instruments, but nothing more. Not only are individuals, in the great average of affairs, inoperative for good; they are also, happily for mankind, inoperative for evil. Nero and Domitian caused enormous mischief, but every trace of it has now disappeared. The occurrences which contemporaries think to be of the greatest importance, and which in point of fact, for a short time are so, invariably turn out in the long run to be the least important of all. They are like meteors which dazzle the vulgar by their brilliancy, and then pass away, leaving no mark behind. Well, therefore, and in the highest spirit of philosophy, did Montesquieu say that the Roman Republic was overthrown, not, as is commonly supposed, by the ambition of Cæsar and Pompey, but by that state of things which made the success of their ambition possible. And so indeed it was. Events which had been long accumulating and had come from afar, pressed on and thickened until their united force was irresistible, and the Republic

grew ripe for destruction. It decayed, it tottered, it was sapped to its foundation; and then, when all was ready, and it was nodding to its fall, Cæsar and Pompey stepped forward, and because they dealt the last blow, we, forsooth, are expected to believe that they produced a catastrophe which the course of affairs had made inevitable before they were born.

The great majority of men will, however, always cling to Cæsar and Pompey; that is to say, they will prefer the study of proximate causes to the study of remote ones. This is connected with another and more fundamental distinction, by virtue of which, life is regarded by practical minds as an art, by speculative minds as a science. And we find every civilized nation divided into two classes corresponding with these two divisions. We find one class investigating affairs with a view to what is most special; the other investigating them with a view to what is most general. This antagonism is essential, and lies in the nature of things. Indeed, it is so clearly marked, that except in minds not only of very great power, but of a peculiar kind of power,

it is impossible to reconcile the two methods; it is impossible for any but a most remarkable man to have them both. Many even of the greatest thinkers have been but too notorious for an ignorance of ordinary affairs, and for an inattention to practical every-day interests. While studying the science of life, they neglect the art of living. This is because such men, notwithstanding their genius, are essentially one-sided and narrow, being, unhappily for themselves, unable or unaccustomed to note the operation of special and proximate causes. Dealing with the remote and the universal, they omit the immediate and the contingent. They sacrifice the actual to the ideal. To their view, all phenomena are suggestive of science, that is of what may be known; while to the opposite view, the same phenomena are suggestive of art, that is of what may be done. A perfect intellect would unite both views, and assign to each its relative importance; but such a feat is of the greatest possible rarity. It may in fact be doubted if more than one instance is recorded of its being performed without a single failure. That instance, I need hardly say, is Shakspeare. No other

mind has thoroughly interwoven the remote with the proximate, the general with the special, the abstract with the concrete. No other mind has so completely incorporated the speculations of the highest philosophy with the meanest details of the lowest life. Shakspeare mastered both extremes, and covered all the intermediate field. He knew both man and men. He thought as deeply as Plato or Kant. He observed as closely as Dickens or Thackeray.

Of whom else can this be said? Other philosophers have, for the most part, overlooked the surface in their haste to reach the summit. Hence the anomaly of many of the most profound thinkers having been ignorant of what it was shameful for them not to know, and having been unable to manage with success even their own affairs. The sort of advice they would give to others may be easily imagined. It is no exaggeration to say that if, in any age of the world, one half of the suggestions made by the ablest men had been adopted, that age would have been thrown into the rankest confusion. Plato was the deepest thinker of antiquity; and yet the proposals

which he makes in his *Republic*, and in his *Treatise on Laws*, are so absurd that they can hardly be read without laughter. Aristotle, little inferior to Plato in depth, and much his superior in comprehensiveness, desired, on purely speculative grounds, that no one should give or receive interest for the use of money: an idea, which, if it had been put into execution, would have produced the most mischievous results, would have stopped the accumulation of wealth, and thereby have postponed for an indefinite period the civilization of the world. In modern as well as in ancient times, systems of philosophy have been raised which involve assumptions, and seek to compel consequences, incompatible with the practical interests of society. The Germans are the most profound philosophers in Europe, and it is precisely in their country that this tendency is most apparent. Comte, the most comprehensive thinker France has produced since Descartes, did in his last work deliberately advocate, and wish to organize, a scheme of polity so monstrously and obviously impracticable, that if it were translated into English, the plain men of our island would lift their

eyes in astonishment, and would most likely suggest that the author should for his own sake be immediately confined. Not that we need pride ourselves too much on these matters. If a catalogue were to be drawn up of the practical suggestions made by our greatest thinkers, it would be impossible to conceive a document more damaging to the reputation of the speculative classes. Those classes are always before the age in their theories, and behind the age in their practice. It is not, therefore, strange that Frederick the Great, who perhaps had a more intimate and personal knowledge of them than any other prince equally powerful, and who moreover admired them, courted them, and, as an author, to a certain slight degree belonged to them, should have recorded his opinion of their practical incapacity in the strongest terms he could find. 'If,' he is reported to have said, 'if I wanted to ruin one of my provinces, I would make over its government to the philosophers.'

This neglect of the surface of things is, moreover, exhibited in the peculiar absence of mind for which many philosophers have been remarkable. Newton was so oblivious

of what was actually passing, that he frequently overlooked or forgot the most necessary transactions, was not sure whether he had dined, and would leave his own house half naked, appearing in that state in the streets, because he fancied all the while that he was fully dressed. Many admire this as the simplicity of genius. I see nothing in it but an unhappy and calamitous principle of the construction of the human mind, which prevents nearly all men from successfully dealing both with the remote and the immediate. They who are little occupied with either, may, by virtue of the smallness of their ambition, somewhat succeed in both. This is the reward of their mediocrity, and they may well be satisfied with it. Dividing such energy as they possess, they unite a little speculation with a little business; a little science with a little art. But in the most eminent and vigorous characters, we find, with extremely rare exceptions, that excellence on one side excludes excellence on the other. Here the perfection of theory, there the perfection of practice; and between the two a gulf which few indeed can bridge. Another and still more remarkable

instance of this unfortunate peculiarity of our nature is supplied by the career of Bacon, who, though he boasted that he made philosophy practical and forced her to dwell among men, was himself so unpractical that he could not deal with events as they successively arose. Yet, he had everything in his favour. To genius of the highest order he added eloquence, wit, and industry. He had good connexions, influential friends, a supple address, an obsequious and somewhat fawning disposition. He had seen life under many aspects, he had mixed with various classes, he had abundant experience, and still he was unable to turn these treasures to practical account. Putting him aside as a philosopher, and taking him merely as a man of action, his conduct was a series of blunders. Whatever he most desired, in that did he most fail. One of his darling objects was the attainment of popularity, in the pursuit of which he, on two memorable occasions, grievously offended the Court from which he sought promotion. So unskilful, however, were his combinations, that in the prosecution of Essex, which was by far the most unpopular act in the reign of Elizabeth, he

played a part not only conspicuous and discreditable, but grossly impolitic. Essex, who was a high-spirited and generous man, was beloved by all classes, and nothing could be more certain than that the violence Bacon displayed against him would recoil on its author. It was also well known that Essex was the intimate friend of Bacon, had exerted himself in every way for him, and had even presented him with a valuable estate. For a man to prosecute his benefactor, to heap invectives upon him at his trial, and having hunted him to the death, publish a libel insulting his memory, was a folly as well as an outrage, and is one of many proofs that in practical matters the judgment of Bacon was unsound. Ingratitude aggravated by cruelty must, if it is generally known, always be a blunder as well as a crime, because it wounds the deepest and most universal feelings of our common nature. However vicious a man may be, he will never be guilty of such an act unless he is foolish as well as vicious. But the philosopher could not foresee those immediate consequences which a plain man would have easily discerned. The truth is, that while the

speculations of Bacon were full of wisdom, his acts were full of folly. He was anxious to build up a fortune, and he did what many persons have done both before and since: he availed himself of his judicial position to take bribes from suitors in his court. But here, again, his operations were so clumsy, that he committed the enormous oversight of accepting bribes from men against whom he afterwards decided. He, therefore, deliberately put himself in the power of those whom he deliberately injured. This was not only because he was greedy after wealth, but also because he was injudiciously greedy. The error was in the head as much as in the heart. Besides being a corrupt judge, he was likewise a bad calculator. The consequence was that he was detected, and being detected, was ruined. When his fame was at its height, when enjoyments of every kind were thickening and clustering round him, the cup of pleasure was dashed from his lips because he quaffed it too eagerly. To say that he fell merely because he was unprincipled, is preposterous, for many men are unprincipled all their lives and never fall at all. Why it is that

bad men sometimes flourish, and how such apparent injustice is remedied, is a mysterious question which this is not the place for discussing; but the fact is indubitable. In practical life men fail, partly because they aim at unwise objects, but chiefly because they have not acquired the art of adapting their means to their end. This was the case with Bacon. In ordinary matters he was triumphed over and defeated by nearly every one with whom he came into contact. His dependents cheated him with impunity; and notwithstanding the large sums he received, he was constantly in debt, so that even while his peculations were going on, he derived little benefit from them. Though, as a judge, he stole the property of others, he did not know how to steal so as to escape detection, and he did not know how to keep what he had stolen. The mighty thinker was, in practice, an arrant trifler. He always neglected the immediate and the pressing. This was curiously exemplified in the last scene of his life. In some of his generalizations respecting putrefaction, it occurred to him that the process might be stopped by snow. He arrived at conclusions like a cautious and

large-minded philosopher: he tried them with the rashness and precipitancy of a child. With an absence of common sense which would be incredible if it were not well attested, he rushed out of his coach on a very cold day, and neglecting every precaution, stood shivering in the air while he stuffed a fowl with snow, risking a life invaluable to mankind, for the sake of doing what any serving man could have done just as well. It did not need the intellect of a Bacon to foresee the result. Before he had finished what he was about, he felt suddenly chilled: he became so ill as to be unable to return to his own house, and his worn-out frame giving way, he gradually sank and died a week after his first seizure.

Such events are very sad, but they are also very instructive. Some, I know, class them under the head of martyrdom for science: to me they seem the penalty of folly. It is at all events certain that in the lives of great thinkers they are painfully abundant. It is but too true that many men of the highest power have, by neglecting the study of proximate causes, shortened their career, diminished their useful-

ness, and, bringing themselves to a premature old age, have deprived mankind of their services just at the time when their experience was most advanced, and their intellect most matured. Others, again, who have stopped short of this, have by their own imprudence become involved in embarrassments of every kind, taking no heed of the morrow, wasting their resources, squandering their substance, and incurring debts which they were unable to pay. This is the result less of vice than of thoughtlessness. Vice is often cunning and wary; but thoughtlessness is always profuse and reckless. And so marked is the tendency, that 'Genius struggling with difficulties' has grown into a proverb. Unhappily, genius has, in an immense majority of cases, created its own difficulties. The consequence is, that not only mere men of the world, but men of sound, useful understandings, do, for the most part, look upon genius as some strange and erratic quality, beautiful indeed to see, but dangerous to possess: a sparkling fire which consumes while it lightens. They regard it with curiosity, perhaps even with interest; but they shake their heads; they regret that

men who are so clever should have so little sense; and, pluming themselves on their own superior sagacity, they complacently remind each other that great wit is generally allied to madness. Who can wonder that this should be? Look at what has occurred in these islands alone, during so short a period as three generations. Look at the lives of Fielding, Goldsmith, Smollett, Savage, Shenstone, Budgell, Charnock, Churchill, Chatterton, Derrick, Parnell, Somerville, Whitehead, Coombe, Day, Gilbert Stuart, Ockley, Oldys, Boyse, Hasted, Smart, Thomson, Grose, Dawes, Barker, Harwood, Porson, Thirlby, Baron, Barry, Coleridge, Fearne, Walter Scott, Byron, Burns, Moore, and Campbell. Here you have men of every sort of ability, distinguished by every variety of imprudence. What does it all mean? Why is it that they who might have been the salt of the earth, and whom we should have been proud to take as our guides, are now pointed at by every blockhead as proofs of the inability of genius to grapple with the realities of life? Why is it that against these, and their fellows, each puny whipster can draw his sword, and dullards

vent their naughty spite? That little men should jeer at great ones, is natural; that they should have reason to jeer at them is shameful. Yet, this must always be the case as long as the present standard of action exists. As long as such expressions as 'the infirmities of genius' form an essential part of our language —as long as we are constantly reminded that genius is naturally simple, guileless, and unversed in the ways of the world—as long as notions of patronizing and protecting it continue—as long as men of letters are regarded with pitying wonder, as strange creatures from whom a certain amount of imprudence must be expected, and in whom it may be tolerated —as long as among them extravagance is called generosity, and economy called meanness—as long as these things happen, so long will the evils that correspond to them endure, and so long will the highest class of minds lose much of their legitimate influence. In the same way, while it is believed that authors must, as a body, be heedless and improvident, it will likewise be believed that for them there must be pensions and subscriptions; that to them Government and society should be bountiful;

and that, on their behalf, institutions should be erected to provide for necessities which it was their own business to have foreseen, but which they, engaged in the arduous employment of writing books, could not be expected to attend to. Their minds are so weak and sickly, so unfit for the rough usages of life, that they must be guarded against the consequences of their own actions. The feebleness of their understandings makes such precautions necessary. There must be hospitals for the intellect, as well as for the body; asylums where these poor, timid creatures may find refuge, and may escape from calamities which their confiding innocence prevented them from anticipating. These are the miserable delusions which still prevail. These are the wretched infatuations by which the strength and majesty of the literary character are impaired. In England there is, I rejoice to say, a more manly and sturdy feeling on these subjects, than in any other part of Europe; but even in England literary men do not sufficiently appreciate the true dignity of their profession; nor do they sufficiently understand that the foundation of all real grandeur is a spirit of

proud and lofty independence. In other countries, the state of opinion is most degrading. In other countries, to have a pension is a mark of honour, and to beg for money is a proof of spirit. Eminent men are turned into hirelings, receive eleemosynary aid, and raise a clamour if the aid is not forthcoming. They snatch at every advantage, and accept even titles and decorations from the first foolish prince who is willing to bestow them. They make constant demands on the public purse, and then they wonder that the public respects them so little. In France, in particular, we have within the last year seen one of the most brilliant writers of the age, who had realized immense sums by his works, and who with common prudence ought to have amassed a large fortune, coming forward as a mendicant, avowing in the face of Europe that he had squandered what he had earned, and soliciting, not only friends, but even strangers, to make up the deficiency. And this was done without a blush, without any sense of the ignominy of the proceeding, but rather with a parade of glorying in it. In a merchant, or a tradesman, such a confession of recklessness would

have been considered disgraceful; and why are men of genius to have a lower code than merchants or tradesmen? Whence comes this confusion of the first principles of justice? By what train of reasoning, or rather, by what process of sophistry, are we to infer, that when men of industry are improvident they shall be ruined, but that when men of letters are improvident they shall be rewarded? How long will this invidious distinction be tolerated? How long will such scandals last? How long will those who profess to be the teachers of mankind behave like children, and submit to be treated as the only class who are deficient in foresight, in circumspection, in economy, and in all those sober and practical virtues which form the character of a good and useful citizen? Nearly every one who cultivates literature as a profession, can gain by it an honest livelihood; and if he cannot gain it, he has mistaken his trade, and should seek another. Let it, then, be clearly understood that what such men earn by their labour, or save by their abstinence, or acquire by lawful inheritance, that they can enjoy without loss of dignity. But if they ask for more, or if

they accept more, they become the recipients of charity, and between them and the beggar who walks the streets, the only difference is in the magnitude of the sum which is expected. To break stones on the highway is far more honourable than to receive such alms. Away, then, with your pensions, your subscriptions, your Literary Institutions, and your Literary Funds, by which you organize mendicancy into a system, and, under pretence of increasing public liberality, increase the amount of public imprudence.

But before this high standard can be reached, much remains to be done. As yet, and in the present early and unformed state of society, literary men are, notwithstanding a few exceptions, more prone to improvidence than the members of any other profession; and being also more deficient in practical knowledge, it too often happens that they are regarded as clever visionaries, fit to amuse the world, but unfit to guide it. The causes of this I have examined at some length, both because the results are extremely important, and because little attention has been hitherto paid to their operation. If I were not afraid of being

tedious I could push the analysis still further, and could show that these very causes are themselves a part of the old spirit of protection, and as such are intimately connected with some religious and political prejudices which obstruct the progress of society; and that in the countries where such prejudices are most powerful, the mischief is most serious and the state of literature most unhealthy. But to prosecute that inquiry would be to write a treatise rather than an essay; and I shall be satisfied if I have cleared the ground so far as I have gone, and have succeeded in tracing the relation between these evils and the general question of philosophic Method. The divergence between speculative minds and practical minds, and the different ways they have of contemplating affairs, are no doubt encouraged by the prevalence of false notions of patronage and reward, which, when they are brought to bear upon any class, inevitably tend to make that class unthrifty, and therefore unpractical. This is a law of the human mind which the political economists have best illustrated in their own department, but the operation of which is universal. Serious, how-

ever, as this evil is, it only belongs to a very imperfect state of society, and after a time it will probably disappear. But the essential, and so far as I can understand, the permanent cause of divergence is a difference of Method. In the creation of our knowledge, it appears to be a fundamental necessity that the speculative classes should search for what is distant, while the practical classes search for what is adjacent. I do not see how it is possible to get rid of this antithesis. There may be some way, which we cannot yet discern, of reconciling the two extremes, and of merging the antagonistic methods into one which, being higher than either, shall include both. At present, however, there is no prospect of such a result. We must, therefore, be satisfied if from time to time, and at long intervals, a man rises whose mind is so happily constructed as to study with equal success the surface and the summit; and who is able to show, by his single example, that views drawn from the most exalted region of thought, are applicable to the common transactions of daily life.

The only living Englishman who has achieved this is Mr. Mill. In the first place,

he is our only great speculative philosopher who for many years has engaged in public life. Since Ricardo, no original thinker has taken an active part in political affairs. Not that those affairs have on that account been worse administered; nor that we have cause to repine at our lot in comparison with other nations. On the contrary, no country has been better governed than ours; and at the present moment, it would be impossible to find in any one European nation more able, zealous, and upright public men than England possesses. In such extremely rare cases as those of Brougham and Macaulay, there are also united to these qualities the most splendid and captivating accomplishments, and the far higher honour which they justly enjoy of having always been the eager and unflinching advocates of popular liberty. It cannot, however, be pretended that even these eminent men have added anything to our ideas; still less can such a claim be made on behalf of their inferiors in the political world. They have popularized the ideas and enforced them, but never created them. They have shown great skill and great courage in applying the conceptions of others;

but the fresh conceptions, the higher and larger generalizations, have not been their work. They can attack old abuses; they cannot discover new principles. This incapacity for dealing with the highest problems has been curiously exemplified during the last two years, when a great number of the most active and eminent of our public men, as well as several who are active without being eminent, have formed an Association for the Promotion of Social Science. Among the papers published by that Association, will be found many curious facts and many useful suggestions. But Social Science there is none. There is not even a perception of what that science is. Not one speaker or writer attempted a scientific investigation of society, or showed that, in his opinion, such a thing ought to be attempted. Where science begins, the Association leaves off. All science is composed either of physical laws, or of mental laws; and as the actions of men are determined by both, the only way of founding Social Science is to investigate each class of laws by itself, and then, after computing their separate results, coördinate the whole into a single study, by verifying them.

This is the only process by which highly complicated phenomena can be disentangled; but the Association did not catch a glimpse of it. Indeed, they reversed the proper order, and proceeded from the concrete to the abstract, instead of from the abstract to the concrete. The reason of this error may be easily explained. The leading members of the Association being mostly politicians, followed the habits of their profession; that is to say, they noted the events immediately surrounding them, and, taking a contemporary view, they observed the actual effects with a view of discovering the causes, and then remedying the evils. This was their plan, and it is natural to men whose occupations lead them to look at the surface of affairs. But to any mind accustomed to rise to a certain height above that surface, and thoroughly imbued with the spirit of scientific method, it is obvious that this way of investigating social phenomena must be futile. Even in the limited field of political action, its results are at best mere empirical uniformities; while in the immense range of social science it is altogether worthless. When men are col-

lected together in society, with their passions and their interests touching each other at every point, it is clear that nothing can happen without being produced by a great variety of causes. Of these causes, some will be conflicting, and their action being neutralized they will often disappear in the product; or, at all events, will leave traces too faint to be discerned. If, then, a cause is counteracted, how can you ascertain its existence by studying its effect? When only one cause produces an effect, you may infer the cause from the effect. But if several causes conspire to produce one effect, this is impossible. The most persevering study of the effect, and the most intimate acquaintance with it, will in such case never lead to a knowledge of the causes; and the only plan is to proceed deductively from cause to effect, instead of inductively from effect to cause. Suppose for example, a ball is struck on different sides by two persons at the same time. The effect will be that the ball, after being struck, will pass from one spot to another; but that effect may be studied for thousands of years without any one being

able to ascertain the causes of the direction the ball took; and even if he is told that two persons have contributed to produce the result, he could not discover how much each person contributed. But if the observer, instead of studying the effect to obtain the causes, had studied the causes themselves, he would have been able, without going further, to predict the exact resting-place of the ball. In other words, by knowing the causes he could learn the effect, but by knowing the effect he could not learn the causes.

Suppose, again, that I hear a musical instrument being played. The effect depends on a great variety of causes, among which are the power possessed by the air of conveying the sound, the power of the ear to receive its vibrations, and the power of the brain to feel them. These are vulgarly called conditions, but they are all causes; inasmuch as a cause can only be defined to be an invariable and unconditional antecedent. They are just as much causes as the hand of the musician; and the question arises, could those causes have been discovered merely by studying the effect the music produced upon

me? Most assuredly not. Most assuredly would it be requisite to study each cause separately, and then, by compounding the laws of their action, predict the entire effect. In social science, the plurality of causes is far more marked than in the cases I have mentioned; and therefore, in social science, the method of proceeding from effects to causes is far more absurd. And what aggravates the absurdity is, that the difficulty produced by the plurality of causes is heightened by another difficulty—namely, the conflict of causes. To deal with such enormous complications as politicians usually deal with them, is simply a waste of time. Every science has some hypothesis which underlies it, and which must be taken for granted. The hypothesis on which social science rests, is that the actions of men are a compound result of the laws of mind and the laws of matter; and as that result is highly complex, we shall never understand it until the laws themselves have been unravelled by a previous and separate inquiry. Even if we could experiment, it would be different; because by experimenting on an effect we can artificially

isolate it, and guard against the encroachment of causes which we do not wish to investigate. But in social science there can be no experiment. For, in the first place, there can be no previous isolation; since every interference lets into the framework of society a host of new phenomena which invalidate the experiment before the experiment is concluded. And, in the second place, that which is called an experiment, such as the adoption of a fresh principle in legislation, is not an experiment in the scientific sense of the word; because the results which follow, depend far more upon the general state of the surrounding society than upon the principle itself. The surrounding state of society is, in its turn, governed by a long train of antecedents, each linked to the other, and forming, in their aggregate, an orderly and spontaneous march, which politicians are unable to control, and which they do for the most part utterly ignore.

This absence of speculative ability among politicians, is the natural result of the habits of their class; and as the same result is almost invariably found among practical men,

I have thought the illustration just adduced might be interesting, in so far as it confirms the doctrine of an essential antagonism of Method, which, though like all speculative distinctions, infringed at various points, does undoubtedly exist, and appears to me to form the basis for a classification of society more complete than any yet proposed. Perhaps, too, it may have the effect of guarding against the rash and confident assertions of public men on matters respecting which they have no means of forming an opinion, because their conclusions are vitiated by the adoption of an illogical method. It is, accordingly, a matter of notoriety that in predicting the results of large and general innovations, even the most sagacious politicians have been oftener wrong than right, and have foreseen evil when nothing but good has come. Against this sort of error, the longest and most extensive experience affords no protection. While statesmen confine themselves to questions of detail, and to short views of immediate expediency, their judgment should be listened to with respect. But beyond this, they are rarely to be heeded. It constantly and indeed usually

happens, that statesmen and legislators who pass their whole life in public affairs, know nothing of their own age, except what lies on the surface, and are therefore unable to calculate, even approximatively, remote and general consequences. Abundant evidence of their incapacity on these points, will present itself to whoever has occasion to read much of State Papers, or of parliamentary discussions in different ages, or, what is still more decisive, the private correspondence of eminent politicians. These reveal but too clearly, that they who are supposed to govern the course of affairs, are utterly ignorant of the direction affairs are really taking. What is before them they see; what is above them they overlook. While, however, this is the deficiency of political practitioners, it must be admitted that political philosophers are, on their side, equally at fault in being too prone to neglect the operation of superficial and tangible results. The difference between the two classes is analogous to that which exists between a gardener and a botanist. Both deal with plants, but each considers the plant from an opposite point of view. The gardener looks to its beauty

and its flavour. These are qualities which lie on the surface; and to these the scientific botanist pays no heed. He studies the physiology; he searches for the law; he penetrates the minute structure, and rending the plant, sacrifices the individual that he may understand the species. The gardener, like the statesman, is accustomed to consider the superficial and the immediate; the botanist, like the philosopher, inquires into the hidden and the remote. Which pursuit is the more valuable, is not now the question; but it is certain that a successful combination of both pursuits is very rare. The habits of mind, the turn of thought, all the associations, are diametrically opposed. To unite them, requires a strength of resolution and a largeness of intellect rarely given to man to attain. It usually happens that they who seek to combine the opposites, fail on both sides, and become at once shallow philosophers and unsafe practitioners.

It must, therefore, be deemed a remarkable fact, that a man who is beyond dispute the deepest of our living thinkers, should, during many years, not only have held a

responsible post in a very difficult department of government, but should, according to the testimony of those best able to judge, have fulfilled the duties of that post with conspicuous and unvarying success. This has been the case with Mr. Mill, and on this account his opinions are entitled to peculiar respect, because they are formed by one who has mastered both extremes of life. Such a duality of function is worthy of especial attention, and it will hardly be taken amiss if I endeavour to show how it has displayed itself in the writings of this great philosopher. To those who delight in contemplating the development of an intellect of the rarest kind, it will not appear unseemly that, before examining his latest work, I should compare those other productions by which he has been hitherto known and which have won for him a vast and permanent fame.

Those works are his *Principles of Political Economy*, and his *System of Logic*. Each of these elaborate productions is remarkable for one of the two greatest qualities of the author; the Political Economy being mostly valuable for the practical application of truths pre-

viously established; while the Logic contains an analysis of the process of reasoning, more subtle and exhaustive than any which has appeared since Aristotle.* Of the Political Economy it is enough to say that none of the principles in it are new. Since the publication of the *Wealth of Nations*, the science had

* I do not except even Kant; because that extraordinary thinker, who in some directions has perhaps penetrated deeper than any philosopher either before or since, did, in his views respecting logic, so anticipate the limits of all future discovery, as to take upon himself to affirm that the notion of inductively obtaining a standard of objective truth, was not only impracticable at present, but involved an essential contradiction which would always be irreconcileable. Whoever upon any subject thus sets up a fixed and prospective limit, gives the surest proof that he has not investigated that subject even as far as the existing resources allow; for he proves that he has not reached that point where certainty ends, and where the dim outline, gradually growing fainter, but always indefinite, teaches us that there is something beyond, and that we have no right to pledge ourselves respecting that undetermined tract. On the other hand, those who stop before they have reached this shadowy outline, see everything clearly because they have not advanced to the place where darkness begins. If I were to venture to criticise such a man as Kant, I should say, after a very careful study of his works, and with the greatest admiration of them, that the depth of his mind considerably exceeded its comprehensiveness.

been entirely remodelled, and it was the object of Mr. Mill not to extend its boundaries, but to turn to practical account what had been achieved by the two generations of thinkers who succeeded Adam Smith. The brilliant discovery of the true theory of rent, which, though not made by Ricardo, was placed by him on a solid foundation, had given an entirely new aspect to economical science; as also had the great law, which he first pointed out, of the distributions of the precious metals, by means of the exchanges, in exact proportion to the traffic which would occur if there were no such metals, and if all trade were conducted by barter. The great work of Malthus on Population, and the discussions to which it led, had ascertained the nature and limits of the connexion which exists between the increase of labour and the rate of wages, and had thus cleared away many of the difficulties which beset the path of Adam Smith. While this threw new light on the causes of the distribution of wealth, Rae had analyzed those other causes which govern its accumulation, and had shown in what manner capital increases with different speed, in differ-

ent countries, and at different times. When we, moreover, add that Bentham had demonstrated the advantages and the necessity of usury as part of the social scheme; that Babbage had with signal ability investigated the principles which govern the economy of labour, and the varying degrees of its productiveness; and that the abstract but very important step had been taken by Wakefield of proving that the supposed ultimate division of labour is in reality but a part of the still higher principle of the coöperation of labour; when we put these things together, we shall see that Mr. Mill found everything ready to his hand, and had only to combine and apply the generalizations of those great speculative thinkers who immediately preceded him.

The success with which he has executed this task is marvellous. His treatise on Political Economy is a manual for statesmen even more than for speculators; since, though it contains no additions to scientific truths, it is full of practical applications. In it, the most recondite principles are illustrated, and brought to the surface, with a force which has convinced many persons whose minds are unable

to follow long trains of abstract reasoning, and who rejected the conclusions of Ricardo, because that illustrious thinker, master though he was of the finest dialectic, lacked the capacity of clothing his arguments in circumstances, and could not adapt them to the ordinary events of political life. This deficiency is supplied by Mr. Mill, who treats political economy as an art even more than as a science.* Hence his book is full of suggestions on many of the most important matters which can be submitted to the legislature of a free people. The laws of bequest and of inheritance; the laws of primogeniture; the laws of partnership and of limited liability; the laws of insolvency and of bankruptcy; the best method of establishing colonies; the advantages and disadvantages of the income-tax; the expediency of meeting extraordinary expenses by taxation drawn from income or

* Thereby becoming necessarily somewhat empirical; for directly the political economist offers practical suggestions, disturbing causes are let in, and trouble the pure science which depends far more upon reasoning than upon observation. No writer I have met with, has put this in a short compass with so much clearness as Mr. Senior. See the introduction to his *Political Economy*, 4th edit. 1858, pp. 2—5.

by an increase of the national debt: these are among the subjects mooted by Mr. Mill, and on which he has made proposals, the majority of which are gradually working their way into the public mind. Upon these topics, his influence is felt by many who do not know from whence the influence proceeds. And no one can have attended to the progress of political opinions during the last ten years, without noticing how, in the formation of practical judgments, his power is operating on politicians who are utterly heedless of his higher generalizations, and who would, indeed, in the largest departments of thought, be well content to sleep on in their dull and ancient routine, but that from time to time, and in their own despite, their slumbers are disturbed by a noise from afar, and they are forced to participate in the result of that prodigious movement which is now gathering on every side, unsettling the stability of affairs, and sapping the foundation of our beliefs.

In such intellectual movements, which lie at the root of social actions, the practical classes can take no original part, though, as all history decisively proves, they are event-

ually obliged to abide by the consequences of them. But it is the peculiar prerogative of certain minds to be able to interpret as well as to originate. To such men a double duty is entrusted. They enjoy the inestimable privilege of communicating directly with practitioners as well as with speculators, and they can both discover the abstract and manipulate the concrete. The concrete and practical tendency of the present age is clearly exhibited in Mr. Mill's work on Political Economy; while in his work on Logic we may see as clearly the abstract and theoretical tendency of the same period. The former work is chiefly valuable in relation to the functions of government; the latter in relation to the functions of thought. In the one, the art of doing; in the other, the science of reasoning. The revolution which he has effected in this great department of speculative knowledge, will be best understood by comparing what the science of logic was when he began to write, with what it was after his work was published.

Until Mr. Mill entered the field there were only two systems of logic. The first was the syllogistic system which was founded by Aris-

totle, and to which the moderns have contributed nothing of moment, except the discovery during the present century of the quantification of the predicate.* The other was the inductive system, as organized by Bacon, to which also it was reserved for our generation to make the first essential addition; Sir John Herschel having the great merit of ascertaining the existence of four different methods, the boundaries of which had escaped the attention of previous philosophers.† That the word logic should by most writers be confined to the syllogistic, or, as it is sometimes called,

* Made by Sir William Hamilton and Mr. De Morgan about the same time and, I believe, independently of each other. Before this, nothing of moment had been added to the Aristotelian doctrine of the syllogism, unless we consider as such the fourth figure. This was unknown to Aristotle; but it may be doubted if it is essential; and, if I rightly remember, Sir Wm. Hamilton did not attach much importance to the fourth syllogistic figure, while Archbishop Whately (*Logic*, 1857, p. 5) calls it 'insignificant.' Compare Mansel's *Aldrich*, 1856, p. 76. The hypothetical syllogism is usually said to be post-Aristotelian; but although I cannot now recover the passage, I have seen evidence which makes me suspect that it was known to Aristotle, though not formally enunciated by him.

† This is acknowledged by Mr. Mill, who has stated and analyzed these methods with great clearness.—Mill's *Logic*, 4th edit. 1856, vol. i. p. 451.

Formal, method, is a striking proof of the extent to which language is infested by the old scholastic prejudices; for, as the science of logic is the theory of the process of inference, and as the art of logic is the practical skill of inferring rightly from given data, it is evident that any system is a system of logic which ascertains the laws of the theory, and lays down the rules of the practice. The inductive system of logic may be better or worse than the deductive; but both are systems.* And till

* Archbishop Whately, who has written what is probably the best elementary treatise existing on formal logic, adopts the old opinion that the inductive 'process of inquiry' by which premises are obtained, is 'out of the province of logic.'—Whately's *Logic*, 1857, p. 151. Mr. De Morgan, whose extremely able work goes much deeper into the subject than Archbishop Whately's, is, however, content with excluding induction, not from logic, but from formal logic. 'What is now called induction, meaning the discovery of laws from instances, and higher laws from lower ones, is beyond the province of formal logic.'—De Morgan's *Logic*, 1847, p. 215. As a law of nature is frequently the major premiss of a syllogism, this statement of Mr. De Morgan's seems unobjectionable. The point at issue involves much more than a mere dispute respecting words, and I therefore add, without subscribing to, the view of another eminent authority. 'To entitle any work to be classed as the logic of this or that school, it is at least necessary that it should, in com-

nearly the middle of the present century, men were divided between the Aristotelian logic which infers from generals to particulars, and the Baconian logic which infers from particulars to generals.*

mon with the Aristotelian logic, adhere to the syllogistic method, whatever modifications or additions it may derive from the particular school of its author.'—Mansel's Introduction to Aldrich's *Artis Logicæ Rudimenta*, 1856, p. xlii. See also Appendix, pp. 194, 195, and Mr. Mansel's *Prolegomena Logica*, 1851, pp. 89, 169. On the other hand, Bacon, who considered the syllogism to be worse than useless, distinctly claims the title of 'logical' for his inductive system. 'Illud vero monendum, nos in hoc nostro organo tractare logicam, non philosophiam.'—*Novum Organum*, lib. ii. Aphor. lii. in Bacon's *Works*, vol. iv. p. 382. This should be compared with the remarks of Sir Wm. Hamilton on inductive logic in his *Discussions*, 1852, p. 158. What strikes one most in this controversy is, that none of the great advocates of the exclusive right of the syllogistic system to the word 'logic' appear to be well acquainted with physical science. They, therefore, cannot understand the real nature of induction in the modern sense of the term, and they naturally depreciate a method with whose triumphs they have no sympathy.

* To what extent Aristotle did or did not recognize an induction of particulars as the first step in our knowledge, and therefore as the base of every major premiss, has been often disputed; but I have not heard that any of the disputants have adopted the only means by which such a question can be tested—namely, bringing together the most decisive passages from

While the science of logic was in this state, there appeared in 1843 Mr. Mill's *System of Logic;* the fundamental idea of which is, that the logical process is not from generals to particulars, nor from particulars to generals, but from particulars to particulars. According to this view, which is gradually securing the adhesion of thinkers the syllogism, instead of being an act of reasoning, is an act, first of registration, and then of interpretation. The major premiss of a syllogism being the record of previous induction, the business of syllogism is to interpret that record and bring it to light. In the syllogism we preserve our experience, and we also realize it; but the reasoning is at an end when the major premiss is enunciated. For, after that enunciation, no fresh truth is propounded. As soon, therefore, as the major is stated, the argument is over; because the general proposition is but a register, or, as it were, a note-book, of inferences which involve

Aristotle, and then leaving them to the judgment of the reader. As this seems to be the most impartial way of proceeding, I have gone through Aristotle's logical works with a view to it; and those who are interested in these matters will find the extracts at the end of this essay.

everything at issue. While, however, the syllogism is not a process of reasoning, it is a security that the previous reasoning is good. And this, in three ways. In the first place, by interposing a general proposition between the collection of the first particulars and the statement of the last particulars, it presents a larger object to the imagination than would be possible if we had only the particulars in our mind. In the second place, the syllogism serves as an artificial memory, and enables us to preserve order among a mass of details; being at once a formula into which we throw them, and a contrivance by which we recall them. Finally, the syllogism is a protection against negligence; since, when we infer from a number of observed cases to a case we have not yet observed, we, instead of jumping at once to that case, state a general proposition which includes it, and which must be true if our conclusion is true; so that, by this means, if we have reasoned erroneously, the error becomes more broad and conspicuous.

This remarkable analysis of the nature and functions of the syllogism is, so far as our

present knowledge goes, exhaustive; whether or not it will admit of still further resolution we cannot tell. At all events it is a contribution of the greatest importance to the science of reasoning, and involves many other speculative questions which are indirectly connected with it, but which I shall not now open up. Neither need I stop to show how it affords a basis for establishing the true distinction between induction and deduction; a distinction which Mr. Mill is one of the extremely few English writers who has thoroughly understood, since it is commonly supposed in this country that geometry is the proper type of deduction, whereas it is only one of the types, and, though an admirable pattern of the deductive investigation of coexistences throws no light on the deductive investigation of sequences. But, passing over these matters as too large to be discussed here, I would call attention to a fundamental principle which underlies Mr. Mill's philosophy, and from which it will appear that he is as much opposed to the advocates of the Baconian method as to those of the Aristotelian. In this respect he has been, perhaps unconsciously,

greatly influenced by the spirit of the age; for it might be easily shown, and indeed will hardly be disputed, that during the last fifty years an opinion has been gaining ground, that the Baconian system has been overrated, and that its favourite idea, of proceeding from effects to causes instead of from causes to effects, will not carry us so far as was supposed by the truly great, though somewhat empirical thinkers of the eighteenth century.

One point in which the inductive philosophy commonly received in England is very inaccurate, and which Mr. Mill has justly attacked, is, that following the authority of Bacon, it insists upon all generalizations being conducted by ascending from each generalization to the one immediately above and adjoining; and it denounces as hasty and unphilosophic any attempt to soar to a higher stage without mastering the intermediate steps.* This is an undue limitation of that

* 'Ascendendo continenter et gradatim, ut ultimo loco perveniatur ad maxime generalia; quæ via vera est, sed intentata.' *Novum Organum*, lib. i. aphor. xix. in Bacon's *Works*, vol. iv. p. 268. London, 1778; 4to. And in lib. i. aphor. civ. p. 294. —'Sed de scientiis tum demum bene sperandum est, quando per

peculiar property of genius which, for want of a better word, we call intuition; and that, in this respect, Bacon's philosophy was too narrow, and placed men too much on the par* by obliging them all to use the same method is now frequently though not generally admitted, and has been perceived by several philosophers.† The objections raised by Mr. Mill on this ground, though put with great ability, are, as he would be the first to confess,

scalam veram et per gradus continuos et non intermissos, aut hiulcos, a particularibus ascendetur ad axiomata minora, et deinde ad media, alia aliis superiora, et postremo demum ad generalissima.'

* 'Nostra vero inveniendi scientias ea est ratio, ut non multum ingeniorum acumini et robori relinquatur; sed quæ ingenia et intellectus fere exaequet.'—*Novum Organum*, lib. i. aphor. lxi.; Bacon's *Works*, vol. iv. p. 275. And in lib. i. aphor. cxxii. [*Works*, vol. iv. p. 301], 'Nostra enim via inveniendi scientias exaequat fere ingenia, et non multum excellentiae eorum relinquit; cum omnia per certissimas regulas et demonstrationes transigat.'

† And is noticed in Whewell's *Philosophy of the Inductive Sciences*, 1847, vol. ii. p. 240; though this celebrated writer, so far from connecting it with Bacon's doctrine of gradual and uninterrupted ascent, considers such doctrine to be the peculiar merit of Bacon, and accuses those who hold a contrary opinion, of 'dimness of vision,' pp. 126, 232. Happily, all are not dim who are said to be so.

not original; and the same remark may be made in a smaller degree concerning another objection—namely, that Bacon did not attach sufficient weight to the plurality of causes,* and did not see that the great complexity they produce would often baffle his method, and would render another method necessary. But while Mr. Mill has in these parts of his work been anticipated, there is a more subtle, and as it appears to me, a more fatal objection which he has made against the Baconian philosophy. And as this objection, besides being entirely new, lies far out of the path of ordinary speculation, it has hardly yet attracted the notice even of philosophic logicians, and the reader will probably be interested in hearing a simple and untechnical statement of it.

Logic, considered as a science, is solely concerned with induction; and the business of induction is to arrive at causes; or, to speak more strictly, to arrive at a knowledge of the laws of causation.† So far Mr. Mill

* Mill's *Logic*, fourth edition, vol. ii. p. 321. I am almost sure this remark has been made before.

† 'The main question of the science of logic is induction,

agrees with Bacon; but from the operation of this rule he removes an immense body of phenomena which were brought under it by the Baconian philosophy. He asserts, and I think he proves, that though uniformities of succession may be investigated inductively, it is impossible to investigate, after that fashion, uniformities of co-existence; and that, therefore, to these last the Baconian method is inapplicable. If, for instance, we say that all negroes have woolly hair, we affirm an uniformity of co-existence between the hair and some other property or properties essential to the negro. But if we were to say that they have woolly hair in consequence of their skin being black, we should affirm an uniformity not of co-existence, but of succession. Uniformities of succession are frequently amenable to induction: uniformities of co-existence are never amenable to it, and are con-

which, however, is almost entirely passed over by professed writers.'—Mill's *Logic*, vol. i. p. 309. 'The chief object of inductive logic is to point out how the laws of causation are to be ascertained.'—Vol. i. p. 407. 'The mental process with which logic is conversant, the operation of ascertaining truths by means of evidence, is always, even when appearances point to a different theory of it, a process of induction.'—Vol. ii. p. 177.

sequently out of the jurisdiction of the Baconian philosophy. They may, no doubt, be treated according to the simple enumeration of the ancients, which, however, was so crude an induction as hardly to be worthy the name.* But the powerful induction of the moderns, depending upon a separation of nature, and an elimination of disturbances, is, in reference to co-existences, absolutely impotent. The

* The character of the Aristotelian induction is so justly portrayed by Mr. Maurice in his admirable account of the Greek philosophy, that I cannot resist the pleasure of transcribing the passage. 'What this induction is, and how entirely it differs from that process which bears the same name in the writings of Bacon, the reader will perceive the more he studies the different writings of Aristotle. He will find, first, that the sensible *phenomenon* is taken for granted as a safe starting point. That phenomena are not principles, Aristotle believed as strongly as we could. But, to suspect phenomena, to suppose that they need sifting and probing in order that we may know what the fact is which they denote, this is no part of his system.'—Maurice's *Ancient Philosophy*, 1850, p. 173. Nothing can be better than the expression that Aristotle did not *suspect* phenomena. The moderns do suspect them, and therefore test them either by crucial experiments or by averages. The latter resource was not effectively employed until the eighteenth century. It now bids fair to be of immense importance, though in some branches of inquiry the nomenclature must become more precise before the full value of the method can be seen.

utmost that it can give is empirical laws, useful for practical guidance, but void of scientific value. That this has hitherto been the case the history of our knowledge decisively proves. That it always will be the case is, in Mr. Mill's opinion, equally certain, because while, on the one hand, the study of uniformities of succession has for its basis that absorbing and over-ruling hypothesis of the constancy of causation, on which every human being more or less relies, and to which philosophers will hear of no exception; we, on the other hand, find that the study of the uniformities of co-existence has no such support, and that therefore the whole field of inquiry is unsettled and indeterminate. Thus it is that if I see a negro suffering pain, the law of causation compels me to believe that something had previously happened of which pain was the necessary consequence. But I am not bound to believe that he possesses some property of which his woolly hair or his dark skin are the necessary accompaniments. I cling to the necessity of an uniform sequence; I reject the necessity of an uniform co-existence. This is the difference between

consequences and concomitants. That the pain has a cause, I am well assured. But for aught I can tell, the blackness and the woolliness may be ultimate properties which are referrible to no cause;* or if they are not ultimate properties, each may be dependent on its own cause, but not be necessarily connected. The relation, therefore, may be universal in regard to the fact, and yet casual in regard to the science.

This distinction when once stated is very simple; but its consequences in relation to the science of logic had escaped all previous thinkers. When thoroughly appreciated, it will dispel the idle dream of the universal application of the Baconian philosophy; and in the meantime it will explain how it was that even during Bacon's life, and in his own hands, his method frequently and signally failed. He evidently believed that as every

* That is, not logically referrible by the understanding. I say nothing of causes which touch on transcendental grounds; but, barring these, Mr. Mill's assertion seems unimpeachable, that 'co-existences between the ultimate properties of things' . . . 'cannot depend on causation,' unless by 'ascending to the origin of all things.'—Mill's *Logic*, vol. ii. p. 106.

phenomenon has something which must follow from it, so also it has something which must go with it, and which he termed its Form.* If he could generalize the form—that is to say, if he could obtain the law of the co-existence—he rightly supposed that he would gain a scientific knowledge of the phenomenon. With this view he taxed his fertile invention to the utmost. He contrived a variety of refined and ingenious artifices, by which various instances might be successfully compared, and the conditions which are essential, distinguished from those which are non-essential. He collated negatives with affirmatives, and taught the art of separating nature by rejections and exclusions. Yet, in regard to the study of co-existences, all his caution, all his knowledge, and all his thought,

* 'Etenim forma naturæ alicujus talis est, ut, ea posita, natura data infallibiliter sequatur. Itaque adest perpetuo, quando natura illa adest, atque eam universaliter affirmat, atque inest omni. Eadem forma talis est, ut ea amota, natura data infallibiliter fugiat. Itaque abest perpetua quando natura illa abest, eamque perpetuo abnegat, atque inest soli.'—*Novum Organum*, lib. ii. aphor. iv.; *Works*, vol. iv. p. 307. Compare also respecting these forms, his treatise on *The Advancement of Learning*, book ii.; *Works*, vol. i. pp. 57, 58, 61, 62.

were useless. His weapons, notwithstanding their power, could make no impression on that stubborn and refractory topic. The laws of co-existences are as great a mystery as ever, and all our conclusions respecting them are purely empirical. Every inductive science now existing is, in its strictly scientific part, solely a generalization of sequences. The reason of this, though vaguely appreciated by several writers, was first clearly stated and connected with the general theory of our knowledge by Mr. Mill. He has the immense merit of striking at once to the very root of the subject, and showing that, in the science of logic, there is a fundamental distinction which forbids us to treat co-existences as we may treat sequences; that a neglect of this distinction impairs the value of the philosophy of Bacon, and has crippled his successors; and finally, that the origin of this distinction may be traced backward and upward until we reach those ultimate laws of causation which support the fabric of our knowledge, and beyond which the human mind, in the present stage of its development, is unable to penetrate.

While Mr. Mill, both by delving to the foundation and rising to the summit, has excluded the Baconian philosophy from the investigation of co-existences, he has likewise proved its incapacity for solving those vast social problems which now, for the first time in the history of the world, the most advanced thinkers are setting themselves to work at deliberately, with scientific purpose, and with something like adequate resources. As this, however, pertains to that domain to which I too, according to my measure and with whatever power I may haply possess, have devoted myself, I am unwilling to discuss here what elsewhere I shall find a fitter place for considering; and I shall be content if I have conveyed to the reader some idea of what has been effected by one whom I cannot but regard as the most profound thinker England has produced since the seventeenth century, and whose services, though recognized by innumerable persons each in his own peculiar walk, are little understood in their entirety, because we, owing partly to the constantly increasing mass of our knowledge, and partly to an excessive veneration for the principle of the

division of labour, are too prone to isolate our inquiries and to narrow the range of our intellectual sympathies. The notion that a man will best succeed by adhering to one pursuit, is as true in practical life as it is false in speculative life. No one can have a firm grasp of any science if, by confining himself to it, he shuts out the light of analogy, and deprives himself of that peculiar aid which is derived from a commanding survey of the co-ordination and interdependence of things and of the relation they bear to each other. He may, no doubt, work at the details of his subject; he may be useful in adding to its facts; he will never be able to enlarge its philosophy. For, the philosophy of every department depends on its connexion with other departments, and must therefore be sought at their points of contact. It must be looked for in the place where they touch and coalesce; it lies not in the centre of each science, but on the confines and margin. This, however, is a truth which men are apt to reject, because they are naturally averse to comprehensive labour, and are too ready to believe that their own peculiar and limited

science is so important that they would not be justified in striking into paths which diverge from it. Hence we see physical philosophers knowing nothing of political economy, political economists nothing of physical science, and logicians nothing of either. Hence, too, there are few indeed who are capable of measuring the enormous field which Mr. Mill has traversed, or of scanning the depth to which in that field he has sunk his shaft.

It is from such a man as this, that a work has recently issued upon a subject far more important than any which even he had previously investigated, and in fact the most important with which the human mind can grapple. For, Liberty is the one thing most essential to the right development of individuals and to the real grandeur of nations. It is a product of knowledge when knowledge advances in a healthy and regular manner; but if under certain unhappy circumstances it is opposed by what seems to be knowledge, then, in God's name, let knowledge perish and Liberty be preserved. Liberty is not a means to an end, it is an end itself. To secure it, to enlarge it, and to diffuse it, should be the

main object of all social arrangements and of all political contrivances. None but a pedant or a tyrant can put science or literature in competition with it. Within certain limits, and very small limits too, it is the inalienable prerogative of man, of which no force of circumstances and no lapse of time can deprive him. He has no right to barter it away even from himself, still less from his children. It is the foundation of all self-respect, and without it the great doctrine of moral responsibility would degenerate into a lie and a juggle. It is a sacred deposit, and the love of it is a holy instinct engraven in our hearts. And if it could be shown that the tendency of advancing knowledge is to encroach upon it; if it could be proved that in the march of what we call civilization, the desire for liberty did necessarily decline, and the exercise of liberty become less frequent; if this could be made apparent, I for one should wish that the human race might halt in its career, and that we might recede step by step, so that the very trophies and memory of our glory should vanish, sooner than that men were bribed by their splendour to forget the sentiment of their own personal dignity.

But it cannot be. Surely it cannot be that we, improving in all other things, should be retrograding in the most essential. Yet, among thinkers of great depth and authority, there is a fear that such is the case. With that fear I cannot agree; but the existence of the fear, and the discussions to which it has led and will lead are extremely salutary, as calling our attention to an evil which in the eagerness of our advance we might otherwise overlook. We are stepping on at a rate of which no previous example has been seen; and it is good that, amid the pride and flush of our prosperity, we should be made to inquire what price we have paid for our success. Let us compute the cost as well as the gain. Before we announce our fortune we should balance our books. Every one, therefore, should rejoice at the appearance of a work in which for the first time the great question of Liberty is unfolded in all its dimensions, considered on every side and from every aspect, and brought to bear upon our present condition with a steadiness of hand and a clearness of purpose which they will most admire who are most accustomed to reflect on this difficult and complicated topic.

In the actual state of the world, Mr. Mill rightly considers that the least important part of the question of liberty is that which concerns the relation between subjects and rulers. On this point, notwithstanding the momentary ascendancy of despotism on the Continent, there is, I believe, nothing to dread. In France and Germany, the bodies of men are enslaved, but not their minds. Nearly all the intellect of Europe is arrayed against tyranny, and the ultimate result of such a struggle can hardly be doubted. The immense armies which are maintained, and which some mention as a proof that the love of war is increasing instead of diminishing, are merely an evidence that the governing classes distrust and suspect the future, and know that their real danger is to be found not abroad but at home. They fear revolution far more than invasion. The state of foreign affairs is their pretence for arming; the state of public opinion is the cause. And right glad they are to find a decent pretext for protecting themselves from that punishment which many of them richly deserve. But I cannot understand how any one who has carefully studied the march of

the European mind, and has seen it triumph over obstacles ten times more formidable than these, can really apprehend that the liberties of Europe will ultimately fall before those who now threaten their existence. When the spirit of freedom was far less strong and less universal, the task was tried, and tried in vain. It is hardly to be supposed that the monarchical principle, decrepit as it now is, and stripped of that dogma of divine right which long upheld it, can eventually withstand the pressure of those general causes which, for three centuries, have marked it for destruction. And, since despotism has chosen the institution of monarchy as that under which it seeks a shelter, and for which it will fight its last battle, we may fairly assume that the danger is less imminent than is commonly imagined, and that they who rely on an old and enfeebled principle, with which neither the religion nor the affections of men are associated as of yore, will find that they are leaning on a broken reed, and that the sceptre of their power will pass from them.

I cannot, therefore, participate in the feel-

ings of those who look with apprehensions at the present condition of Europe. Mr. Mill would perhaps take a less sanguine view; but it is observable that the greater part of his defence of liberty is not directed against political tyranny. There is, however, another sort of tyranny which is far more insidious, and against which he has chiefly bent his efforts. This is the despotism of custom, to which ordinary minds entirely succumb, and before which even strong minds quail. But custom being merely the product of public opinion, or rather its external manifestation, the two principles of custom and opinion must be considered together; and I will briefly state how, according to Mr. Mill, their joint action is producing serious mischief, and is threatening mischief more serious still.

The proposition which Mr. Mill undertakes to establish is, that society, whether acting by the legislature or by the influence of public opinion, has no right to interfere with the conduct of any individual for the sake of his own good. Society may interfere with him for their good, not for his. If his actions hurt them, he is, under certain circumstances,

amenable to their authority; if they only hurt himself, he is never amenable. The proposition, thus stated, will be acceded to by many persons who, in practice, repudiate it every day of their lives. The ridicule which is cast upon whoever deviates from an established custom, however trifling and foolish that custom may be, shows the determination of society to exercise arbitrary sway over individuals. On the most insignificant as well as on the most important matters, rules are laid down which no one dares to violate, except in those extremely rare cases in which great intellect, great wealth, or great rank enable a man rather to command society than to be commanded by it. The immense mass of mankind are, in regard to their usages, in a state of social slavery; each man being bound under heavy penalties to conform to the standard of life common to his own class. How serious those penalties are, is evident from the fact that though innumerable persons complain of prevailing customs and wish to shake them off, they dare not do so, but continue to practise them, though frequently at the expense of health, comfort, and fortune. Men, not

cowards in other respects, and of a fair share of moral courage, are afraid to rebel against this grievous and exacting tyranny. The consequences of this are injurious, not only to those who desire to be freed from the thraldom, but also to those who do not desire to be freed; that is, to the whole of society. Of these results, there are two particularly mischievous, and which, in the opinion of Mr. Mill, are likely to gain ground, unless some sudden change of sentiment should occur.

The first mischief is, that a sufficient number of experiments are not made respecting the different ways of living; from which it happens that the art of life is not so well understood as it otherwise would be. If society were more lenient to eccentricity, and more inclined to examine what is unusual than to laugh at it, we should find that many courses of conduct which we call whimsical, and which according to the ordinary standard are utterly irrational, have more reason in them than we are disposed to imagine. But, while a country or an age will obstinately insist upon condemning all human conduct which

is not in accordance with the manner or fashion of the day, deviations from the straight line will be rarely hazarded. We are, therefore, prevented from knowing how far such deviations would be useful. By discouraging the experiment, we retard the knowledge. On this account, if on no other, it is advisable that the widest latitude should be given to unusual actions, which ought to be valued as tests whereby we may ascertain whether or not particular things are expedient. Of course, the essentials of morals are not to be violated, nor the public peace to be disturbed. But short of this, every indulgence should be granted. For progress depends upon change; and it is only by practising uncustomary things that we can discover if they are fit to become customary.

The other evil which society inflicts on herself by her own tyranny is still more serious; and although I cannot go with Mr. Mill in considering the danger to be so imminent as he does, there can, I think, be little doubt that it is the one weak point in modern civilization; and that it is the only thing of importance in which, if we are not actually

receding, we are making no perceptible advance.

This is, that most precious and inestimable quality, the quality of individuality. That the increasing authority of society, if not counteracted by other causes, tends to limit the exercise of this quality, seems indisputable. Whether or not there are counteracting causes is a question of great complexity, and could not be discussed without entering into the general theory of our existing civilization. With the most unfeigned deference for every opinion enunciated by Mr. Mill, I venture to differ from him on this matter, and to think that, on the whole, individuality is not diminishing, and that so far as we can estimate the future, it is not likely to diminish. But it would ill become any man to combat the views of this great thinker, without subjecting the point at issue to a rigid and careful analysis; and as I have not done so, I will not weaken my theory by advancing imperfect arguments in its favour, but will, as before, confine myself to stating the conclusions at which he has arrived, after what has

evidently been a train of long and anxious reflection.

According to Mr. Mill, things are tending, and have for some time tended, to lessen the influence of original minds, and to raise mediocrity to the foremost place. Individuals are lost in the crowd. The world is ruled not by them, but by public opinion; and public opinion, being the voice of the many, is the voice of mediocrity. Affairs are now governed by average men, who will not pay to great men the deference that was formerly yielded. Energy and originality being less respected, are becoming more rare; and in England in particular, real energy has hardly any field, except in business, where a large amount of it undoubtedly exists.* Our greatness is collective, and depends not upon what we do as individuals, but upon our power of combining. In every successive generation, men more resemble each other in all

* 'There is now scarcely any outlet for energy in this country except business. The energy expended in that may still be regarded as considerable.'—Mill *On Liberty*, p. 125. I suppose that, under the word business, Mr. Mill includes political and the higher class of official pursuits.

respects. They are more alike in their civil and political privileges, in their habits, in their tastes, in their manners, in their dress, in what they see, in what they do, in what they read, in what they think, and in what they say. On all sides the process of assimilation is going on. Shades of character are being blended, and contrasts of will are being reconciled. As a natural consequence, the individual life, that is, the life which distinguishes each man from his fellows, is perishing. The consolidation of the many destroys the action of the few. While we amalgamate the mass, we absorb the unit.

The authority of society is, in this way, ruining society itself. For, the human faculties can, for the most part, only be exercised and disciplined by the act of choosing; but he who does a thing merely because others do it, makes no choice at all. Constantly copying the manners and opinions of our contemporaries, we strike out nothing that is new; we follow on in a dull and monotonous uniformity. We go where others lead. The field of option is being straitened; the number of alternatives is diminishing. And the result

is, a sensible decay of that vigour and raciness of character, that diversity and fulness of life, and that audacity both of conception and of execution which marked the strong men of former times, and enabled them at once to improve and to guide the human species.

Now all this is gone, perhaps never to return, unless some great convulsion should previously occur. Originality is dying away, and is being replaced by a spirit of servile and apish imitation. We are degenerating into machines who do the will of society; our impulses and desires are repressed by a galling and artificial code; our minds are dwarfed and stunted by the checks and limitations to which we are perpetually subjected.

How, then, is it possible to discover new truths of real importance? How is it possible that creative thought can flourish in so sickly and tainted an atmosphere? Genius is a form of originality; if the originality is discouraged, how can the genius remain? It is hard to see the remedy for this crying evil. Society is growing so strong as to destroy individuality; that is, to destroy the very quality

to which our civilization, and therefore our social fabric, is primarily owing.

The truth is, that we must vindicate the right of each man to do what he likes, and to say what he thinks, to an extent much greater than is usually supposed to be either safe or decent. This we must do for the sake of society, quite as much as for our own sake. That society would be benefited by a greater freedom of action has been already shown; and the same thing may be proved concerning freedom of speech and of writing. In this respect, authors, and the teachers of mankind generally, are far too timid; while the state of public opinion is far too interfering. The remarks which Mr. Mill has made on this, are so exhaustive as to be unanswerable; and though many will call in question what he has said respecting the decline of individuality, no well instructed person will dispute the accuracy of his conclusions respecting the need of an increased liberty of discussion and of publication.

In the present state of knowledge the majority of people are so ill-informed as not to be aware of the true nature of belief; they

are not aware that all belief is involuntary, and is entirely governed by the circumstances which produce it. They who have paid attention to these subjects, know that what we call the will has no power over belief, and that consequently a man is nowise responsible for his creed, except in so far as he is responsible for the events which gave him his creed. Whether, for instance, he is a Mohammedan or a Christian, will usually resolve itself into a simple question of his geographical antecedents. He who is born in Constantinople, will hold one set of opinions; he who is born in London, will hold another set. Both act according to their light and their circumstances, and if both are sincere both are guiltless. In each case, the believer is controlled by physical facts which determine his creed and over which he can no more exercise authority than he can exercise authority over the movements of the planets or the rotation of the earth. This view, though long familiar to thinkers, can hardly be said to have been popularized before the present century;* and to its diffusion, as well

* Its diffusion was greatly helped by Bailey's *Essays on the Formation of Opinions*, which were first published, I believe,

as to other larger and more potent causes, we must ascribe the increasing spirit of toleration to which not only our literature but even our statute-book bears witness.

But, though belief is involuntary, it will be objected, with a certain degree of plausibility, that the expression of that belief, and particularly the formal and written publication, is a voluntary act, and consequently a responsible one. If I were arguing the question exhaustively, I should at the outset demur to this proposition, and should require it to be stated in more cautious and limited terms; but, to save time, let us suppose it to be true, and let us inquire whether, if a man be responsible to himself for the publication of his opinions, it is right that he should be also held responsible by those to whom he offers them? In other words, is it proper that law or public opinion should discourage an individual from publishing sentiments which are hostile to the prevailing notions, and are considered by the rest of society to be false and mischievous?

in 1821; and being popularly written, as well as suitable to the age, have exercised considerable influence.

Upon this point, the arguments of Mr. Mill are so full and decisive that I despair of adding anything to them. It will be enough if I give a summary of the principal ones; for it would be strange, indeed, if before many months are past, this noble treatise, so full of wisdom and of thought, is not in the hands of every one who cares for the future welfare of humanity, and whose ideas rise above the immediate interests of his own time.

Those who hold that an individual ought to be discouraged from publishing a work containing heretical or irreligious opinions, must, of course, assume that such opinions are false; since, in the present day, hardly any man would be so impudent as to propose that a true opinion should be stifled because it was unusual as well as true. We are all agreed that truth is good; or, at all events, those who are not agreed must be treated as persons beyond the pale of reason, and on whose obtuse understandings it would be idle to waste an argument. He who says that truth is not always to be told, and that it is not fit for all minds, is simply a defender of falsehood; and we should take no notice of him,

inasmuch as the object of discussion being to destroy error, we cannot discuss with a man who deliberately affirms that error should be spared.

We take, therefore, for granted that those who seek to prevent any opinion being laid before the world, do so for the sake of truth, and with a view to prevent the unwary from being led into error. The intention is good; it remains for us to inquire how it operates.

Now, in the first place, we can never be sure that the opinion of the majority is true. Nearly every opinion held by the majority was once confined to the minority. Every established religion was once a heresy. If the opinions of the majority had always prevailed, Christianity would have been extirpated as soon as Christ was murdered. If an age or a people assume that any notion they entertain is certainly right, they assume their own infallibility, and arrogantly claim for themselves a prerogative which even the wisest of mankind never possess. To affirm that a doctrine is unquestionably revealed from above, is equally to affirm their own infallibility, since they affirm that they cannot be mistaken

in believing it to be revealed. A man who is sure that his creed is true, is sure of his own infallibility, because he is sure that upon that point he has committed no error. Unless, therefore, we are prepared to claim, on our own behalf, an immunity from error, and an incapability of being mistaken, which transcend the limits of the human mind, we are bound not only to permit our opinions to be disputed, but to be grateful to those who will do so. For, as no one who is not absurdly and immodestly confident of his own powers, can be sure that what he believes to be true is true, it will be his object, if he be an honest man, to rectify the errors he may have committed. But it is a matter of history that errors have only been rectified by two means; namely, by experience and discussion. The use of discussion is to show how experience is to be interpreted. Experience alone, has never improved either mankind or individuals. Experience, before it can be available, must be sifted and tested. This is done by discussion, which brings out the meaning of experience, and enables us to apply the observations that have been made, and turn them to account. Human judgment

owes its value solely to the fact that when it is wrong it is possible to set it right. Inasmuch, however, as it can only be set right by the conflict and collision of hostile opinions, it is clear that when those opinions are smothered, and when that conflict is stopped, the means of correcting our judgment are gone, and hence the value of our judgment is destroyed. The more, therefore, that the majority discourage the opinions of the minority, the smaller is the chance of the majority holding accurate views. But if, instead of discouraging the opinions, they should suppress them, even that small chance is taken away, and society can have no option but to go on from bad to worse, its blunders becoming more inveterate and more mischievous, in proportion as that liberty of discussion which might have rectified them has been the longer withheld.

Here we, as the advocates of liberty, might fairly close the argument, leaving our opponents in the dilemma of either asserting their own infallibility, or else of abandoning the idea of interfering with freedom of discussion. So complete, however, is our case, that we can actually afford to dispense with what has

been just stated, and support our views on other and totally different grounds. We will concede to those who favour restriction, all the premises that they require. We will concede to them the strongest position that they can imagine, and we will take for granted that a nation has the means of knowing with absolute certainty that some of its opinions are right. We say, then, and we will prove, that, assuming these opinions to be true, it is advisable that they should be combated, and that their truth should be denied. That an opinion which is held by an immense majority, and which is moreover completely and unqualifiedly true, ought to be contested, and that those who contest it do a public service, appears at first sight to be an untenable paradox. A paradox, indeed, it is, if by a paradox we mean an assertion not generally admitted; but, so far from being untenable, it is a sound and wholesome doctrine, which, if it were adopted, would, to an extraordinary extent, facilitate the progress of society.

Supposing any well-established opinion to be certainly true, the result of its not being vigorously attacked is, that it becomes more

passive and inert than it would otherwise be. This, as Mr. Mill observes, has been exemplified in the history of Christianity. In the early Church, while Christianity was struggling against innumerable opponents, it displayed a life and an energy which diminished in proportion as the opposition was withdrawn When an enemy is at the gate, the garrison is alert. If the enemy retires, the alertness slackens; and if he disappears altogether, nothing remains but the mere forms and duty of discipline, which, unenlivened by danger, grow torpid and mechanical. This is a law of the human mind, and is of universal application. Every religion, after being established, loses much of its vitality. Its doctrines being less questioned, it naturally happens that those who hold them, scrutinize them less closely, and therefore grasp them less firmly. Their wits being no longer sharpened by controversy, what was formerly a living truth dwindles into a dead dogma. The excitement of the battle being over, the weapons are laid aside; they fall into disuse; they grow rusty; the skill and fire in the warrior are gone. It is amid the roar of the cannon, the flash of

the bayonet, and the clang of the trumpet, that the forms of men dilate; they swell with emotion; their bulk increases; their stature rises, and even small natures wax into great ones, able to do all and to dare all.

So, indeed, it is. On any subject, universal acquiescence always engenders universal apathy. By a parity of reasoning, the greater the acquiescence the greater the apathy. All hail, therefore, to those who, by attacking a truth, prevent that truth from slumbering. All hail to those bold and fearless natures, the heretics and innovators of the day, who, rousing men out of their lazy sleep, sound in their ears the tocsin and the clarion, and force them to come forth that they may do battle for their creed. Of all evils, torpor is the most deadly. Give us paradox, give us error, give us what you will, so that you save us from stagnation. It is the cold spirit of routine which is the nightshade of our nature. It sits upon men like a blight, blunting their faculties, withering their powers, and making them both unable and unwilling either to struggle for the truth, or to figure to themselves what it is that they really believe.

See how this has acted, in regard to the

doctrines of the New Testament. When those doctrines where first propounded, they were vigorously assailed, and therefore the early Christians clung to them, realized them, and bound them up in their hearts to an extent unparalleled in any subsequent age. Every Christian professes to believe that it is good to be ill-used and buffeted; that wealth is an evil, because rich men cannot enter the kingdom of heaven; that if your cloak is taken, you must give your coat also; that if you are smitten on one cheek, you should turn round and offer the other. These and similar doctrines, the early Christians not only professed, but acted up to and followed. The same doctrines are contained in our Bibles, read in our churches, and preached in our pulpits. Who is there that obeys them? And what reason is there for this universal defection, beyond the fact that when Christianity was constantly assailed, those who received its tenets held them with a tenacity and saw them with a vividness which cannot be expected in an age that sanctions them by general acquiescence? Now, indeed, they are not only acquiesced in, they are also watched

over and sedulously protected. They are protected by law, and by that public opinion which is infinitely more powerful than any law. Hence it is, that to them, men yield a cold and lifeless assent; they hear them and they talk about them, but whoever was to obey them with that scrupulous fidelity which was formerly practised, would find to his cost how much he had mistaken his age, and how great is the difference, in vitality and in practical effect, between doctrines which are generally received and those which are fearlessly discussed.

In proportion as knowledge has advanced, and habits of correct thinking been diffused, men have gradually approached towards these views of liberty, though Mr. Mill has been the first to bring them together in a thoroughly comprehensive spirit, and to concentrate in a single treatise all the arguments in their behalf. How everything has long tended to this result, must be known to whoever has studied the history of the English mind. Whatever may be the case respecting the alleged decline of individuality, and the increasing tyranny of custom, there can, at all events, be no doubt

that, in religious matters, public opinion is constantly becoming more liberal. The legal penalties which our ignorant and intolerant ancestors inflicted upon whoever differed from themselves, are now some of them repealed, and some of them obsolete. Not only have we ceased to murder or torture those who disagree with us, but, strange to say, we have even recognized their claim to political rights as well as to civil equality. The admission of the Jews into Parliament, that just and righteous measure, which was carried in the teeth of the most cherished and inveterate prejudice, is a striking proof of the force of the general movement; as also is the rapidly increasing disposition to abolish oaths, and to do away in public life with every species of religious tests. Partly as cause, and partly as effect of all this, there never was a period in which so many bold and able attacks were made upon the prevailing theology, and in which so many heretical doctrines were propounded, not only by laymen, but occasionally by ministers of the church, some of the most eminent of whom have, during the present generation, come forward to denounce the

errors in their own system, and to point out the flaws in their own creed. The unorthodox character of physical science is equally notorious; and many of its professors do not scruple to impeach the truth of statements which are still held to be essential, and which, in other days, no one could have impugned without exposing himself to serious danger. In former times, such men would have been silenced or punished; now, they are respected and valued; their works are eagerly read, and the circle of their influence is steadily widening. According to the letter of our law-books, these, and similar publications, which fearless and inquisitive men are pouring into the public ear, are illegal, and Government has the power of prosecuting their authors. The state of opinion, however, is so improved, that such prosecutions would be fatal to any Government which instigated them. We have, therefore, every reason to congratulate ourselves on having outlived the reign of open persecution. We may fairly suppose that the cruelties which our forefathers committed in the name of religion, could not now be perpetrated, and that it

would be impossible to punish a man merely because he expressed notions which the majority considered to be profane and mischievous.

Under these circumstances, and seeing that the practice of prosecuting men for uttering their sentiments on religious matters has been for many years discontinued, an attempt to revive that shameful custom would, if it were generally known, be at once scouted. It would be deemed unnatural as well as cruel: out of the ordinary course, and wholly unsuited to the humane and liberal notions of an age which seeks to relax penalties rather than to multiply them. As to the man who might be mad enough to make the attempt, we should look upon him in the light in which we should regard some noxious animal, which, being suddenly let loose, went about working harm, and undoing all the good that had been previously done. We should hold him to be a nuisance which it was our duty either to abate, or to warn people of. To us, he would be a sort of public enemy; a disturber of human happiness; a creature hostile to the human species. If he possessed

authority, we should loathe him the more, as one who, instead of employing for the benefit of his country the power with which his country had entrusted him, used it to gratify his own malignant prejudices, or maybe to humour the spleen of some wretched and intolerant faction with which he was connected.

Inasmuch, therefore, as, in the present state of English society, any punishment inflicted for the use of language which did not tend to break the public peace, and which was neither seditious in reference to the State, nor libellous in reference to individuals, would be simply a wanton cruelty, alien to the genius of our time, and capable of producing no effect beyond reviving intolerance, exasperating the friends of liberty, and bringing the administration of justice into disrepute, it was with the greatest astonishment that I read in Mr. Mill's work that such a thing had occurred in this country, and at one of our asssizes, less than two years ago. Notwithstanding my knowledge of Mr. Mill's accuracy, I thought that, in this instance, he must have been mistaken. I supposed that

he had not heard all the circumstances, and that the person punished had been guilty of some other offence. I could not believe that in the year 1857, there was a judge on the English bench who would sentence a poor man of irreproachable character, of industrious habits, and supporting his family by the sweat of his brow, to twenty-one months' imprisonment, merely because he had uttered and written on a gate a few words respecting Christianity. Even now, when I have carefully investigated the facts to which Mr. Mill only alludes, and have the documents before me, I can hardly bring myself to realize the events which have actually occurred, and which I will relate, in order that public opinion may take cognizance of a transaction which happened in a remote part of the kingdom, but which the general welfare requires to be bruited abroad, so that men may determine whether or not such things shall be allowed.

In the summer of 1857, a poor man named Thomas Polley, was gaining his livelihood as a common labourer in Liskeard, in Cornwall, where he had been well known for several years, and had always borne a high character

for honesty, industry, and sobriety. His habits were so eccentric, that his mind was justly reputed to be disordered; and an accident which happened to him about two years before this period, had evidently inflicted some serious injury, as since then his demeanour had become more strange and excitable. Still, he was not only perfectly harmless, but was a very useful member of society, respected by his neighbours, and loved by his family, for whom he toiled with a zeal rare in his class, or indeed in any class. Among other hallucinations, he believed that the earth was a living animal, and, in his ordinary employment of well-sinking, he avoided digging too deeply, lest he should penetrate the skin of the earth, and wound some vital part. He also imagined that if he hurt the earth, the tides would cease to flow; and that nothing being really mortal, whenever a child died it reappeared at the next birth in the same family. Holding all nature to be animated, he moreover fancied that this was in some way connected with the potato-rot, and, in the wildness of his vagaries, he did not hesitate to say, that if

the ashes of burnt Bibles were strewed over the fields, the rot would cease. This was associated, in his mind, with a foolish dislike of the Bible itself, and an hostility against Christianity; in reference, however, to which he could hurt no one, as not only was he very ignorant, but his neighbours, regarding him as crack-brained, were uninfluenced by him; though in the other relations of life he was valued and respected by his employers, and indeed by all who were most acquainted with his disposition.

This singular man, who was known by the additional peculiarity of wearing a long beard, wrote upon a gate a few very silly words expressive of his opinion respecting the potato-rot and the Bible, and also of his hatred of Christianity. For this, as well as for using language equally absurd, but which no one was obliged to listen to, and which certainly could influence no one, a clergyman in the neighbourhood lodged an information against him, and caused him to be summoned before a magistrate, who was likewise a clergyman. The magistrate, instead of pitying him or remonstrating with him, committed him for

trial and sent him to jail. At the next assizes, he was brought before the judge. He had no counsel to defend him, but the son of the judge acted as counsel to prosecute him. The father and the son performed their parts with zeal, and were perfectly successful. Under their auspices, Pooley was found guilty. He was brought up for judgment. When addressed by the judge, his restless manner, his wild and incoherent speech, his disordered countenance and glaring eye, betokened too surely the disease of his mind. But neither this, nor the fact that he was ignorant, poor, and friendless, produced any effect upon that stony-hearted man who now held him in his gripe. He was sentenced to be imprisoned for a year and nine months. The interests of religion were vindicated. Christianity was protected, and her triumph assured, by dragging a poor, harmless and demented creature from the bosom of his family, throwing him into jail, and leaving his wife and children without provision, either to starve or to beg.

Before he had been many days in prison, the insanity which was obvious at the time of his trial, ceased to lurk, and broke out into

acts of violence. He grew worse; and within a fortnight after the sentence had been pronounced he went mad, and it was found necessary to remove him from the jail to the County Lunatic Asylum. While he was lying there, his misfortunes attracted the attention of a few high-minded and benevolent men, who exerted themselves to procure his pardon; so that, if he recovered, he might be restored to his family. This petition was refused. It was necessary to support the judge; and the petitioners were informed that if the miserable lunatic should regain his reason, he would be sent back to prison to undergo the rest of his sentence. This, in all probability, would have caused a relapse; but little was thought of that; and it was hoped that, as he was an obscure and humble man, the efforts made in his behalf would soon subside. Those, however, who had once interested themselves in such a case, were not likely to slacken their zeal. The cry grew hotter, and preparations were made for bringing the whole question before the country. Then it was that the authorities gave way. Happily for mankind, one vice is often bal-

anced by another, and cruelty is corrected by cowardice. The authors and abettors of this prodigious iniquity trembled at the risk they would run if the public feeling of this great country were roused. The result was, that the proceedings of the judge were rescinded, as far as possible, by a pardon being granted to Pooley less than five months after the sentence was pronounced.

By this means, general exposure was avoided; and perhaps that handful of noble-minded men who obtained the liberation of Pooley, were right in letting the matter fall into oblivion after they had carried their point. Most of them were engaged in political or other practical affairs, and they were, therefore, obliged to consider expediency as well as justice. But such is not the case with the historian of this sad event. No writer on important subjects has reason to expect that he can work real good, or that his words shall live, if he allows himself to be so trammelled by expediency as to postpone to it considerations of right, of justice, and of truth. A great crime has been committed, and the names of the criminals ought to be

known. They should be in every one's mouth. They should be blazoned abroad, in order that the world may see that in a free country such things cannot be done with impunity. To discourage a repetition of the offence the offenders must be punished. And, surely, no punishment can be more severe than to preserve their names. Against them personally, I have nothing to object, for I have no knowledge of them. Individually, I can feel no animosity towards men who have done me no harm, and whom I have never seen. But they have violated principles dearer to me than any personal feeling, and in vindication of which I would set all personal feeling at nought. Fortunate, indeed, it is for humanity that our minds are constructed after such a fashion as to make it impossible for us, by any effort of abstract reasoning, to consider oppression apart from the oppressor. We may abhor a speculative principle, and yet respect him who advocates it. This distinction between the opinion and the person is, however, confined to the intellectual world, and does not extend to the practical. Such a separation cannot exist in regard to actual

deeds of cruelty. In such cases, our passions instruct our understanding. The same cause which excites our sympathy for the oppressed, stirs up our hatred of the oppressor. This is an instinct of our nature, and he who struggles against it does so to his own detriment. It belongs to the higher region of the mind; it is not to be impeached by argument; it cannot even be touched by it. Therefore it is, that when we hear that a poor, a defenceless, and a half-witted man, who had hurt no one, a kind father, an affectionate husband, whose private character was unblemished, and whose integrity was beyond dispute, is suddenly thrown into prison, his family left to subsist on the precarious charity of strangers, he himself by this cruel treatment deprived of the little reason he possessed, then turned into a mad-house, and finally refused such scanty redress as might have been accorded him, a spirit of vehement indignation is excited, partly, indeed, against a system under which such things can be done; but still more against those who, in the pride of their power and wickedness of their hearts, put laws into execution which had long fallen into disuse, and which

they were not bound to enforce, but of which they availed themselves to crush the victim they held in their grasp.

The prosecutor who lodged the information against Pooley, and had him brought before the magistrate, was the Rev. Paul Bush. The magistrate who received the information, and committed him for trial, was the Rev. James Glencross. The judge who passed the sentence which destroyed his reason and beggared his family, was Mr. Justice Coleridge.

Of the two first, little need be said. It is to be hoped that their names will live, and that they will enjoy that sort of fame which they have amply earned. Perhaps, after all, we should rather blame the state of society which concedes power to such men, than wonder that having the power they should abuse it. But, with Mr. Justice Coleridge we have a different account to settle, and to him other language must be applied. That our judges should have great authority is unavoidable. To them, a wide and discretionary latitude is necessarily entrusted. Great confidence being reposed in them, they are bound by every possible principle which can

actuate an honest man, to respect that confidence. They are bound to avoid not only injustice, but, so far as they can, the very appearance of injustice. Seeing, as they do, all classes of society, they are well aware that, among the lower ranks, there is a deep, though on the whole a diminishing, belief that the poor are ill-treated by the rich, and that even in the courts of law equal measure is not always meted out to both. An opinion of this sort is full of danger, and it is the more dangerous because it is not unfounded. The country magistrates are too often unfair in their decisions, and this will always be the case until greater publicity is given to their proceedings. But, from our superior judges we expect another sort of conduct. We expect, and it must honestly be said we usually find, that they shall be above petty prejudices, or at all events, that whatever private opinions they may have, they shall not intrude those opinions into the sanctuary of justice. Above all do we expect that they shall not ferret out some obsolete law for the purpose of oppressing the poor, when they know right well that the anti-Christian sentiments which that

law was intended to punish are quite as common among the upper classes as among the lower, and are participated in by many persons who enjoy the confidence of the country and to whom the highest offices are entrusted.

That this is the case, was known in the year 1857 to Mr. Justice Coleridge, just as it was then known, and is now known, to every one who mixes in the world. The charge, therefore, which I bring against this unjust and unrighteous judge is, that he passed a sentence of extreme severity upon a poor and friendless man in a remote part of the kingdom, where he might reasonably expect that his sentence would escape public animadversion; that he did this by virtue of a law which had fallen into disuse, and was contrary to the spirit of the age;* and that he would not have dared to commit such an act, in the face of a London audience, and in the full light of the London press. Neither

* Or rather by virtue of the cruel and persecuting maxims of our old Common Law, established at a period when it was a matter of religion to burn heretics and to drown witches. Why did not such a judge live three hundred years ago? He has fallen upon evil times and has come too late into the world.

would he, nor those who supported him, have treated in such a manner a person belonging to the upper classes. No. They select the most inaccessible county in England, where the press is least active and the people are most illiterate, and there they pounce upon a defenceless man and make him the seapegoat. He is to be the victim whose vicarious sufferings may atone for the offences of more powerful unbelievers. Hardly a year goes by, without some writer of influence and ability attacking Christianity, and every such attack is punishable by law. Why did not Mr. Justice Coleridge, and those who think like him, put the law into force against those writers? Why do they not do it now? Why do they not have the learned and the eminent indicted and thrown into prison? Simply because they dare not. I defy them to it. They are afraid of the odium; they tremble at the hostility they would incur and at the scorn which would be heaped upon them, both by their contemporaries and by posterity. Happily for mankind, literature is a real power, and tyranny quakes at it. But to me it appears, that men of letters perform

the least part of their duty when they defend each other. It is their proper function, and it ought to be their glory, to defend the weak against the strong, and to uphold the poor against the rich. This should be their pride and their honour. I would it were known in every cottage, that the intellectual classes sympathize, not with the upper ranks, but with the lower. I would that we made the freedom of the people our first consideration. Then, indeed, would literature be the religion of liberty, and we, priests of the altar, ministering her sacred rites, might feel that we act in the purest spirit of our creed when we denounce tyranny in high places, when we chastise the insolence of office, and when we vindicate the cause of Thomas Pooley against Justice Coleridge.

For my part, I can honestly say that I have nothing exaggerated, nor set down aught in malice. What the verdict of public opinion may be, I cannot tell. I speak merely as a man of letters, and do not pretend to represent any class. I have no interest to advocate; I hold no brief; I carry no man's proxy. But unless I altogether mistake the general feeling,

it will be considered that a great crime has been committed; that a knowledge of that crime has been too long hidden in a corner; and that I have done something towards dragging the criminal from his covert, and letting in on him the full light of day.

This gross iniquity is, no doubt, to be immediately ascribed to the cold heart and shallow understanding of the judge by whom it was perpetrated. If, however, public opinion had been sufficiently enlightened, those evil qualities would have been restrained and rendered unable to work the mischief. Therefore it is, that the safest and most permanent remedy would be to diffuse sound notions respecting the liberty of speech and of publication. It should be clearly understood that every man has an absolute and irrefragable right to treat any doctrine as he thinks proper; either to argue against it, or to ridicule it. If his arguments are wrong, he can be refuted; if his ridicule is foolish, he can be out-ridiculed. To this, there can be no exception. It matters not what the tenet may be, nor how dear it is to our feelings. Like all other opinions, it must take its chance;

it must be roughly used; it must stand every test; it must be thoroughly discussed and sifted. And we may rest assured that if it really be a great and valuable truth, such opposition will endear it to us the more; and that we shall cling to it the closer, in proportion as it is argued against, aspersed, and attempted to be overthrown.

If I were asked for an instance of the extreme latitude to which such licence might be extended, I would take what, in my judgment, at least, is the most important of all doctrines, the doctrine of a future state. Strictly speaking, there is, in the present early condition of the human mind, no subject on which we can arrive at complete certainty; but the belief in a future state approaches that certainty nearer than any other belief, and it is one which, if eradicated, would drive most of us to despair. On both these grounds, it stands alone. It is fortified by arguments far stronger than can be adduced in support of any other opinion; and it is a supreme consolation to those who suffer affliction, or smart under a sense of injustice. The attempts made to impugn it, have always

seemed to me to be very weak, and to leave the real difficulties untouched. They are negative arguments directed against affirmative ones. But if, in transcendental inquiries, negative arguments are to satisfy us, how shall we escape from the reasonings of Berkeley respecting the non-existence of the material world? Those reasonings have never been answered, and our knowledge must be infinitely more advanced than it now is, before they can be answered. They are far stronger than the arguments of the atheists; and I cannot but wonder that they who reject a future state, should believe in the reality of the material world. Still, those who do reject it, are not only justified in openly denying it, but are bound to do so. Our first and paramount duty is to be true to ourselves; and no man is true to himself who fears to express his opinion. There is hardly any vice which so debases us in our own esteem, as moral cowardice. There is hardly any virtue which so elevates our character, as moral courage. Therefore it is, that the more unpopular a notion, the greater the merit of him who advocates it, provided, of course, he does so in

honesty and singleness of heart. On this account, although I regard the expectation of another life as the prop and mainstay of mankind, and although I cannot help thinking that they who reject it have taken an imperfect and uncomprehensive view, and have not covered the whole field of inquiry, I do strenuously maintain, that against it every species of attack is legitimate, and I feel assured that the more it is assailed, the more it will flourish, and the more vividly we shall realize its meaning, its depth, and its necessity.

That many of the common arguments in favour of this great doctrine are unsound, might be easily shown; but, until the entire subject is freely discussed, we shall never know how far they are unsound, and what part of them ought to be retained. If, for instance, we make our belief in it depend upon assertions contained in books regarded as sacred, it will follow that whenever those books lose their influence the doctrine will be in peril. The basis being impaired, the superstructure will tremble. It may well be that, in the march of ages, every definite and written creed now existing is destined to die out, and to be

succeeded by better ones. The world has been the beginning of them, and we have no surety that it will not see the end of them. Everything which is essential to the human mind must survive all the shocks and vicissitudes of time; but dogmas, which the mind once did without, cannot be essential to it. Perhaps, we have no right so to anticipate the judgment of our remotest posterity, as to affirm that any opinion is essential to all possible forms of civilization; but, at all events, we have more reason to believe this of the doctrine of a future state than of any other conceivable idea. Let us then beware of endangering its stability by narrowing its foundation. Let us take heed how we rest it on the testimony of inspired writings, when we know that inspiration at one epoch is often different from inspiration at another. If Christianity should ever perish, the age that loses it, will have reason to deplore the blindness of those who teach mankind to defend this glorious and consolatory tenet, not by general considerations of the fundamental properties of our common nature, but by traditions, assertions, and records, which do not bear the

stamp of universality, since in one state of society they are held to be true, and in another state of society they are held to be false.

Of the same fluctuating and precarious character, is the argument drawn from the triumph of injustice in this world, and the consequent necessity of such unfairness being remedied in another life. For, it admits of historical proof that, as civilization advances, the impunity and rewards of wickedness diminish. In a barbarous state of society, virtue is invariably trampled upon, and nothing really succeeds except violence or fraud. In that stage of affairs, the worst criminals are the most prosperous men. But in every succeeding step of the great progress, injustice becomes more hazardous; force and rapine grow more unsafe; precautions multiply; the supervision is keener; tyranny and deceit are oftener detected. Being oftener detected, it is less profitable to practise them. In the same proportion, the rewards of integrity increase, and the prospects of virtue brighten. A large part of the power, the honour, and the fame formerly possessed by evil men is transferred to good men. Acts of injus-

tice which at an earlier period would have escaped attention, or, if known, would have excited no odium, are now chastised, not only by law, but also by public opinion. Indeed, so marked is this tendency, that many persons, by a singular confusion of thought, actually persuade themselves that offences are increasing because we hear more of them, and punish them oftener; not seeing that this merely proves that we note them more and hate them more. We redouble our efforts against injustice, not on account of the spread of injustice, but on account of our better understanding how to meet it, and being more determined to coerce it. No other age has ever cried out against it so loudly; and yet, strange to say, this very proof of our superiority to all other ages is cited as evidence of our inferiority. This, I shall return to elsewhere; my present object in mentioning it, is partly to check a prevailing error, but chiefly to indicate its connexion with the subject before us. Nothing is more certain than that, as society advances, the weak are better protected against the strong; the honest against the dishonest; and the just against the unjust. If,

then, we adopt the popular argument in favour of another life, that injustice here, must be compensated hereafter, we are driven to the terrible conclusion that the same progress of civilization, which, in this world, heightens the penalties inflicted on injustice, would also lessen the need of future compensation, and thereby weaken the ground of our belief. The inference would be untrue, but it follows from the premises. To me it appears not only sad, but extremely pernicious, that on a topic of such surpassing interest, the understandings of men should be imposed upon by reasonings which are so shallow, that, if pushed to their legitimate consequence, they would defeat their own aim, because they would force us to assert that the more we improve in our moral conduct towards each other, the less we should care for a future and a better world.

I have brought forward these views for the sake of justifying the general proposition maintained in this essay. For, it is evident that if the state of public opinion did not discourage a fearless investigation of these matters, and did not foolishly cast a slur upon those who attack doctrines which are dear

to us, the whole subject would be more thoroughly understood, and such weak arguments as are commonly advanced would have been long since exploded. If they who deny the immortality of the soul, could, without the least opprobrium, state in the boldest manner all their objections, the advocates of the doctrine would be obliged to reconsider their own position, and to abandon its untenable points. By this means, that which I revere, and which an overwhelming majority of us revere, as a glorious truth, would be immensely strengthened. It would be strengthened by being deprived of those sophistical arguments which are commonly urged in its favour, and which give to its enemies an incalculable advantage. It would, moreover, be strengthened by that feeling of security which men have in their own convictions, when they know that everything is said against them which can be said, and that their opponents have a fair and liberal hearing. This begets a magnanimity, and a rational confidence, which cannot otherwise be obtained. But, such results can never happen while we are so timid, or so dishonest, as to

impute improper motives to those who assail our religious opinions. We may rely upon it that as long as we look upon an atheistical writer as a moral offender, or even as long as we glance at him with suspicion, atheism will remain a standing and a permanent danger, because, skulking in hidden corners, it will use stratagems which their secresy will prevent us from baffling; it will practise artifices to which the persecuted are forced to resort; it will number its concealed proselytes to an extent of which only they who have studied this painful subject are aware; and, above all, by enabling them to complain of the treatment to which they are exposed, it will excite the sympathy of many high and generous natures who, in an open and manly warfare, might strive against them, but who by a noble instinct, find themselves incapable of contending with any sect which is oppressed, maligned, or intimidated.

Though this essay has been prolonged much beyond my original intention, I am unwilling to conclude it just at this point, when I have attacked arguments which support a doctrine that I cherish above all other doc-

trines. It is, indeed, certain that he who destroys a feeble argument in favour of any truth, renders the geatest service to that truth, by obliging its advocates to produce a stronger one. Still, an idea will prevail among some persons that such service is insidious; and that to expose the weak side of a cause, is likely to be the work, not of a friend but of an enemy in disguise. Partly, therefore, to prevent misinterpretation from those who are always ready to misinterpret, and partly for the satisfaction of more candid readers, I will venture to state what I apprehend to be the safest and most impregnable ground on which the supporters of this great doctrine can take their stand.

That ground is the universality of the affections; the yearning of every mind to care for something out of itself. For, this is the very bond and seal of our common humanity; it is the golden link which knits together and preserves the human species. It is in the need of loving and of being loved, that the highest instincts of our nature are first revealed. Not only is it found among the good and the virtuous, but experience proves that

it is compatible with almost any amount of depravity, and with almost every form of vice. No other principle is so general or so powerful. It exists in the most barbarous and ferocious states of society, and we know that even sanguinary and revolting crimes are often unable to efface it from the breast of the criminal. It warms the coldest temperament, and softens the hardest heart. However a character may be deteriorated and debased, this single passion is capable of redeeming it from utter defilement, and of rescuing it from the lowest depths. And if, from time to time, we hear of an apparently well attested case of its entire absence, we are irresistibly impelled to believe that, even in that mind, it lurks unseen; that it is stunted, not destroyed; that there is yet some nook or cranny in which it is buried; that the avenues from without are not quite closed; and that, in spite of adverse circumstances, the affections are not so dead but that it would be possible to rouse them from their torpor, and kindle them into life.

Look now at the way in which this godlike and fundamental principle of our nature

acts. As long as we are with those whom we love, and as long as the sense of security is unimpaired, we rejoice, and the remote consequences of our love are usually forgotten. Its fears and its risks are unheeded. But, when the dark day approaches, and the moment of sorrow is at hand, other and yet essential parts of our affection come into play. And if, perchance, the struggle has been long and arduous; if we have been tempted to cling to hope when hope should have been abandoned, so much the more are we at the last changed and humbled. To note the slow, but inevitable march of disease, to watch the enemy stealing in at the gate, to see the strength gradually waning, the limbs tottering more and more, the noble faculties dwindling by degrees, the eye paling and losing its lustre, the tongue faltering as it vainly tries to utter its words of endearment, the very lips hardly able to smile with their wonted tenderness;—to see this, is hard indeed to bear, and many of the strongest natures have sunk under it. But when even this is gone; when the very signs of life are mute; when the last faint tie is severed, and there lies

before us nought save the shell and husk of what we loved too well, then truly, if we believed the separation were final, how could we stand up and live? We have staked our all upon a single cast, and lost the stake. There, where we have garnered up our hearts, and where our treasure is, thieves break in and spoil. Methinks, that in that moment of desolation, the best of us would succumb, but for the deep conviction that all is not really over; that we have as yet only seen a part; and that something remains behind. Something behind; something which the eye of reason cannot discern, but on which the eye of affection is fixed. What is that, which, passing over us like a shadow, strains the aching vision as we gaze at it? Whence comes that sense of mysterious companionship in the midst of solitude; that ineffable feeling which cheers the afflicted? Why is it that, at these times, our minds are thrown back on themselves, and, being so thrown, have a forecast of another and a higher state? If this be a delusion, it is one which the affections have themselves created, and we must believe that the purest and noblest ele-

ments of our nature conspire to deceive us. So surely as we lose what we love, so surely does hope mingle with grief. That if a man stood alone, he would deem himself mortal, I can well imagine. Why not? On account of his loneliness, his moral faculties would be undeveloped, and it is solely from them that he could learn the doctrine of immortality. There is nothing, either in the mechanism of the material universe, or in the vast sweep and compass of science, which can teach it. The human intellect, glorious as it is, and in its own field almost omnipotent, knows it not. For, the province and function of the intellect is to take those steps, and to produce those improvements, whether speculative or practical, which accelerate the march of nations, and to which we owe the august and imposing fabric of modern civilization. But this intellectual movement which determines the condition of man, does not apply with the same force to the condition of men. What is most potent in the mass, loses its supremacy in the unit. One law for the separate elements; another law for the entire compound. The intellectual principle is conspicuous in regard to the race;

the moral principle in regard to the individual. And of all the moral sentiments which adorn and elevate the human character, the instinct of affection is surely the most lovely, the most powerful, and the most general. Unless, therefore, we are prepared to assert that this, the fairest and choicest of our possessions, is of so delusive and fraudulent a character, that its dictates are not to be trusted, we can hardly avoid the conclusion, that, inasmuch as they are the same in all ages, with all degrees of knowledge, and with all varieties of religion, they bear upon their surface the impress of truth, and are at once the conditions and consequence of our being.

It is, then, to that sense of immortality with which the affections inspire us, that I would appeal for the best proof of the reality of a future life. Other proofs perhaps there are, which it may be for other men or for other times to work out. But, before this can be done, the entire subject will have to be reopened, in order that it may be discussed with boldness and yet with calmness, which however cannot happen as long as a stigma rests on those who attack the belief; because

its assailants, being unfairly treated, will for the most part be either timid or passionate. How mischievous as well as how unjust such a stigma is, has, I trust, been made apparent, and to that part of the question I need not revert. One thing only I would repeat, because I honestly believe it to be of the deepest importance. Most earnestly would I again urge upon those who cherish the doctrine of immortality, not to defend it, as they too often do, by arguments which have a basis smaller than the doctrine itself. I long to see this glorious tenet rescued from the jurisdiction of a narrow and sectarian theology, which, foolishly, ascribing to a single religion the possession of all truth, proclaims other religions to be false, and debases the most magnificent topics by contracting them within the horizon of its own little vision. Every creed which has existed long and played a great part, contains a large amount of truth, or else it would not have retained its hold upon the human mind. To suppose, however, that any one of them contains the whole truth, is to suppose that as soon as that creed was enunciated the limits of inspiration were

reached, and the power of inspiration exhausted. For such a supposition we have no warrant. On the contrary, the history of mankind, if compared in long periods, shows a very slow, but still a clearly marked, improvement in the character of successive creeds; so that if we reason from the analogy of the past, we have a right to hope that the improvement will continue, and that subsequent creeds will surpass ours. Using the word religion in its ordinary sense, we find that the religious opinions of men depend on an immense variety of circumstances which are constantly shifting. Hence it is, that whatever rests merely upon these opinions has in it something transient and mutable. Well, therefore, may they who take a distant and comprehensive view, be filled with dismay when they see a doctrine like the immortality of the soul defended in this manner. Such advocates incur a heavy responsibility. They imperil their own cause; they make the fundamental depend upon the casual; they support what is permanent by what is ephemeral; and with their books, their dogmas, their traditions, their rituals, their records,

and their other perishable contrivances, they seek to prove what was known to the world before these existed, and what, if these were to die away, would still be known, and would remain the common heritage of the human species, and the consolation of myriads yet unborn.

Note to p. 85.

Ὅτι δὲ ἐκ τῶν πρότερον εἰρημένων οἱ λόγοι, καὶ διὰ τούτων, καὶ προς ταῦτα, μία μὲν πίστις ἡ διὰ τῆς ἐπαγωγῆς. Εἰ γάρ τις ἐπισκοποίη ἑκάστην τῶν προτάσεων καὶ τῶν προβλημάτων· φαίνοιτ' ἂν ἢ ἀπὸ τοῦ ὅρου, ἢ ἀπὸ τοῦ ἰδίου, ἢ ἀπὸ τοῦ συμβεβηκότος γεγενημένη. —*Aristotelis Topicorum*, lib. i. cap. vi., Lipsiæ, 1832, p. 104.

Διωρισμένων δὲ τούτων, χρὴ διελέσθαι, πόσα τῶν λόγων εἴδη τῶν διαλεκτικῶν. Ἔστι δὲ τὸ μὲν ἐπαγωγὴ, τὸ δὲ συλλογισμός. Καὶ συλλογισμὸς μὲν τί ἐστιν, εἴρηται πρότερον. Ἐπαγωγὴ δὲ ἡ ἀπὸ τῶν καθέκαστα ἐπὶ τὰ καθόλου ἔφοδος· οἷον, εἰ ἔστι κυβερνήτης ὁ ἐπιστάμενος κράτιστος, καὶ ἡνίοχος· καὶ ὅλως ἐστὶν ὁ ἐπιστάμενος περὶ ἕκαστον ἄριστος.—*Aristot. Topic.*, lib. i. cap. x. p. 108.

Ἐὰν δὲ μὴ τιθῇ, δι' ἐπαγωγῆς ληπτέον, προτείνοντα ἐπὶ τῶν κατὰ μέρος ἐναντίων. Ἡ γὰρ διὰ συλλογισμοῦ, ἢ δι' ἐπαγωγῆς τὰς ἀναγκαίας ληπτέον· ἢ τὰς μὲν ἐπαγωγῇ, τὰς δὲ συλλογισμῷ· ὅσαι δὲ λίαν προφανεῖς εἰσι, καὶ αὐτὰς προτείνοντα. Ἀδηλότερόν τε γὰρ ἀεὶ ἐν τῇ ἀποστάσει καὶ τῇ ἐπαγωγῇ τὸ συμβεσόμενον· καὶ ἅμα τὸ αὐτὰς τὰς χρησίμους προτεῖναι καὶ μὴ δυνάμενον ἐκεί-

νως λαβεῖν, ἕτοιμον. Τὰς δὲ παρὰ ταύτας εἰρημένας ληπτέον μὲν τούτων χάριν· ἑκάστη δὲ ὧδε χρηστέον. Ἐπάγοντα μὲν ἀπὸ τῶν καθέκαστα ἐπὶ τὰ καθόλου, καὶ τῶν γνωρίμων ἐπὶ τὰ ἄγνωστα.—*Aristot. Topic.*, lib. viii. cap. i. pp. 253, 254.

Ἐπεὶ δὲ πᾶσα πρότασις συλλογιστικὴ ἢ τούτων τίς ἐστιν, ἐξ ὧν ὁ συλλογισμὸς, ἢ τινος τούτων ἕνεκα· δῆλον δ', ὅταν ἑτέρου χάριν λαμβάνηται τῷ πλείῳ τὰ ὅμοια ἐρωτᾶν· (ἡ γὰρ δι' ἐπαγωγῆς, ἢ δι' ὁμοιότητος, ὡς ἐπὶ τὸ πολὺ τὸ καθόλου λαμβάνουσι·) τὰ μὲν καθέκαστα πάντα θετέον, ἂν ᾖ ἀληθῆ καὶ ἔνδοξα·—*Aristot. Topic.*, lib. viii. cap. vii. p. 267.

τῇ μὲν οὖν καθόλου θεωροῦμεν τὰ ἐν μέρει, τῇ δὲ οἰκεία οὐκ ἴσμεν. Ὥστ' ἐνδέχεται καὶ ἀπατᾶσθαι περὶ αὐτά· πλὴν οὐκ ἐναντίως, ἀλλ' ἔχειν μὲν τὴν καθόλου, ἀπατᾶσθαι δὲ τῇ κατὰ μέρος.—*Aristotelis Analytica Priora*, lib. ii. cap. xxiii., Lipsiæ, 1832, p. 134.

Ἅπαντα γὰρ πιστεύομεν ἢ διὰ συλλογισμοῦ, ἢ ἐξ ἐπαγωγῆς. Ἐπαγωγὴ μὲν οὖν ἐστι καὶ ὁ ἐξ ἐπαγωγῆς συλλογισμὸς τὸ διὰ τοῦ ἑτέρου θάτερον ἄκρον τῷ μέσῳ συλλογίσασθαι.—*Aristot. Analyt. Prior.*, lib. ii. cap. xxv. p. 138.

Φανερὸν δὲ καὶ, ὅτι, εἴ τις αἴσθησις ἐκλέλοιπεν, ἀνάγκη, καὶ ἐπιστήμην τινὰ ἐκλελοιπέναι, ἣν ἀδύνατον λαβεῖν· εἴπερ μανθάνομεν ἢ ἐπαγωγῇ, ἢ ἀποδείξει. Ἔστι δ' ἡ μὲν ἀπόδειξις ἐκ τῶν καθόλου· ἡ δ' ἐπαγωγὴ ἐκ τῶν κατὰ μέρος· ἀδύνατον δὲ τὰ καθόλου θεωρῆσαι, εἰ μὴ δι' ἐπαγωγῆς· (ἐπεὶ καὶ τὰ ἐξ ἀφαιρέσεως λεγόμενα ἔσται δι' ἐπαγωγῆς γνώριμα, ἐάν τις βούληται γνώριμα ποιεῖν, ὅτι ὑπάρχει ἑκάστῳ γένει ἕνια, καὶ εἰ μὴ χωριστά ἐστιν, ᾗ τοιον δὶ ἕκαστον·) ἐπαχθῆναι δὲ μὴ ἔχοντας αἴσθησιν ἀδύνατον. Τῶν γὰρ καθέκαστον ἡ αἴσθησις· οὐ γὰρ ἐνδέχεται λαβεῖν αὐτῶν. τὴν ἐπιστήμην· οὔτε γὰρ ἐκ τῶν καθόλου ἄνευ ἐπαγωγῆς, οὔτε διὰ τῆς ἐπαγωγῆς ἄνευ τῆς αἰσθήσεως.—*Aristotelis Analytica Posteriora*, lib. i. cap. xviii., Lipsiæ, 1832, p. 117.

Καὶ ἡ μὲν καθόλου νοητή· ἡ δὲ κατὰ μέρος εἰς αἴσθησιν τελευτᾷ.—*Analyt. Post.*, lib. i. cap. xxiv. p. 191.

All that Aristotle knew of induction is contained in these passages. What he says in his Metaphysics is more vaguely expressed, or perhaps the text is more corrupt. The early part of the first book may, however, be looked at.

THE

INFLUENCE OF WOMEN

ON THE

PROGRESS OF KNOWLEDGE.

THE INFLUENCE OF WOMEN ON THE PROGRESS OF KNOWLEDGE.*

The subject upon which I have undertaken to address you is the influence of women on the progress of knowledge, undoubtedly one of the most interesting questions that could be submitted to any audience. Indeed, it is not only very interesting, it is also extremely important. When we see how knowledge has civilized mankind; when we see how every great step in the march and advance of nations has been invariably preceded by a corresponding step in their knowledge; when we moreover see, what is assuredly true, that women are constantly growing more influential, it becomes a matter of great moment that we should endeavour to

* A Discourse delivered at the Royal Institution, on Friday, the 19th of March, 1858.

ascertain the relation between their influence and our knowledge. On every side, in all social phenomena, in the education of children, in the tone and spirit of literature, in the forms and usages of life; nay, even in the proceedings of legislatures, in the history of statute-books, and in the decisions of magistrates, we find manifold proofs that women are gradually making their way, and slowly but surely winning for themselves a position superior to any they have hitherto attained. This is one of many peculiarities which distinguish modern civilization, and which show how essentially the most advanced countries are different from those that formerly flourished. Among the most celebrated nations of antiquity, women held a very subordinate place. The most splendid and durable monument of the Roman empire, and the noblest gift Rome has bequeathed to posterity, is her jurisprudence—a vast and harmonious system, worked out with consummate skill, and from which we derive our purest and largest notions of civil law. Yet this, which, not to mention the immense sway it still exercises in France and Germany, has taught to our most enlightened lawyers their

best lessons; and which enabled Bracton among the earlier jurists, Somers, Hardwicke, Mansfield, and Stowell among the later, to soften by its refinement the rude maxims of our Saxon ancestors, and adjust the coarser principles of the old Common Law to the actual exigencies of life; this imperishable specimen of human sagacity is, strange to say, so grossly unjust towards women, that a great writer upon that code has well observed, that in it women are regarded not as persons, but as things; so completely were they stripped of all their rights, and held in subjection by their proud and imperious masters. As to the other great nation of antiquity, we have only to open the literature of the ancient Greeks to see with what airs of superiority, with what serene and lofty contempt, and sometimes with what mocking and biting scorn, women were treated by that lively and ingenious people. Instead of valuing them as companions, they looked on them as toys. How little part women really took in the development of Greek civilization may be illustrated by the singular fact, that their influence, scanty as it was, did not reach its height in the most civil-

ized times, or in the most civilized regions. In modern Europe, the influence of women and the spread of civilization have been nearly commensurate, both advancing with almost equal speed. But if you compare the picture of Greek life in Homer with that to be found in Plato and his contemporaries, you will be struck by a totally opposite circumstance. Between Plato and Homer there intervened, according to the common reckoning, a period of at least four centuries, during which the Greeks made many notable improvements in the arts of life, and in various branches of speculative and practical knowledge. So far, however, from women participating in this movement, we find that, in the state of society exhibited by Plato and his contemporaries, they had evidently lost ground; their influence being less then than it was in the earlier and more barbarous period depicted by Homer. This fact illustrates the question in regard to time; another fact illustrates it in regard to place. In Sparta, women possessed more influence than they did in Athens; although the Spartans were rude and ignorant, the Athenians polite and accomplished.

The causes of these inconsistencies would form a curious subject for investigation: but it is enough to call your attention to them as one of many proofs that the boasted civilizations of antiquity were eminently one-sided, and that they fell because society did not advance in all its parts, but sacrificed some of its constituents in order to secure the progress of others.

In modern European society we have happily no instance of this sort; and if we now inquire what the influence of women has been upon that society, every one will allow that on the whole it has been extremely beneficial. Their influence has prevented life from being too exclusively practical and selfish, and has saved it from degenerating into a dull and monotonous routine, by infusing into it an ideal and romantic element. It has softened the violence of men; it has improved their manners; it has lessened their cruelty. Thus far, the gain is complete and undeniable. But if we ask what their influence has been, not on the general interests of society, but on one of those interests, namely, the progress of knowledge, the answer is not so obvious. For,

to state the matter candidly, it must be confessed that none of the greatest works which instruct and delight mankind, have been composed by women. In poetry, in painting, in sculpture, in music, the most exquisite productions are the work of men. No woman, however favourable her circumstances may have been, has made a discovery sufficiently important to mark an epoch in the annals of the human mind. These are facts which cannot be contested, and from them a very stringent and peremptory inference has been drawn. From them it has been inferred, and it is openly stated by eminent writers, that women have no concern with the highest forms of knowledge; that such matters are altogether out of their reach; that they should confine themselves to practical, moral, and domestic life, which it is their province to exalt and to beautify; but that they can exercise no influence, direct or indirect, over the progress of knowledge, and that if they seek to exercise such influence, they will not only fail in their object, but will restrict the field of their really useful and legitimate activity.

Now, I may as well state at once, and at

the outset, that I have come here to-night with the intention of combating this proposition, which I hold to be unphilosophical and dangerous; false in theory and pernicious in practice. I believe, and I hope before we separate to convince you, that so far from women exercising little or no influence over the progress of knowledge, they are capable of exercising, and have actually exercised, an enormous influence; that this influence is, in fact, so great that it is hardly possible to assign limits to it; and that great as it is, it may with advantage be still further increased. I hope, moreover, to convince you that this influence has been exhibited not merely from time to time in rare, sudden, and transitory ebullitions, but that it acts by virtue of certain laws inherent to human nature; and that although it works as an under-current below the surface, and is therefore invisible to hasty observers, it has already produced the most important results, and has affected the shape, the character, and the amount of our knowledge.

To clear up this matter, we must first of all understand what knowledge is. Some men who pride themselves on their common sense

—and whenever a man boasts much about that, you may be pretty sure that he has very little sense, either common or uncommon—such men there are who will tell you that all knowledge consists of facts, that everything else is mere talk and theory, and that nothing has any value except facts. Those who speak so much of the value of facts may understand the meaning of fact, but they evidently do not understand the meaning of value. For, the value of a thing is not a property residing in that thing, nor is it a component; but it is simply its relation to some other thing. We say, for instance, that a five-shilling piece has a certain value; but the value does not reside in the coin. If it does, where is it? Our senses cannot grasp value. We cannot see value, nor hear it, nor feel it, nor taste it, nor smell it. The value consists solely in the relation which the five-shilling piece bears to something else. Just so in regard to facts. Facts, as facts, have no sort of value, but are simply a mass of idle lumber. The value of a fact is not an element or constituent of that fact, but is its relation to the total stock of our knowledge, either present or prospective.

Facts, therefore, have merely a potential and, as it were, subsequent value, and the only advantage of possessing them is the possibility of drawing conclusions from them; in other words, of rising to the idea, the principle, the law which governs them. Our knowledge is composed not of facts, but of the relations which facts and ideas bear to themselves and to each other; and real knowledge consists not in an acquaintance with facts, which only makes a pedant, but in the use of facts, which makes a philosopher.

Looking at knowledge in this way, we shall find that it has three divisions,—Method, Science, and Art. Of method I will speak presently; but I will first state the limits of the other two divisions. The immediate object of all art is either pleasure or utility: the immediate object of all science is solely truth. As art and science have different objects, so also have they different faculties. The faculty of art is to change events; the faculty of science is to foresee them. The phenomena with which we deal are controlled by art; they are predicted by science. The more complete a science is, the greater its power

of prediction; the more complete an art is, the greater its power of control. Astronomy, for instance, is called the queen of the sciences, because it is the most advanced of all; and the astronomer, while he abandons all hope of controlling or altering the phenomena, frequently knows what the phenomena will be years before they actually appear; the extent of his foreknowledge proving the accuracy of his science. So, too, in the science of mechanics, we predict that, certain circumstances being present, certain results must follow; and having done this, our science ceases. Our art then begins, and from that moment the object of utility and the faculty of control come into play; so that in the art of mechanics, we alter what in the science of mechanics we were content to foresee.

One of the most conspicuous tendencies of advancing civilization is to give a scientific basis to that faculty of control which is represented by art, and thus afford fresh prominence to the faculty of prediction. In the earliest stage of society there are many arts, but no sciences. A little later, science begins to appear, and every subsequent step is marked

by an increased desire to bring art under the dominion of science. To those who have studied the history of the human mind, this tendency is so familiar that I need hardly stop to prove it. Perhaps the most remarkable instance is in the case of agriculture, which, for thousands of years, was a mere empirical art, resting on the traditional maxims of experience, but which, during the present century, chemists began to draw under their jurisdiction, so that the practical art of manuring the ground is explained by laws of physical science. Probably the next step will be to bring another part of the art of agriculture under the dominion of meteorology, which will be done as soon as the conditions which govern the changes of the weather have been so generalized as to enable us to foretell what the weather will be.

General reasoning, therefore, as well as the history of what has been actually done, justify us in saying that the highest, the ripest, and the most important form of knowledge, is the scientific form of predicting consequences; it is therefore to this form that I shall restrict the remainder of what I have to say to you respecting the influence of women. And the

point which I shall attempt to prove is, that there is a natural, a leading, and probably an indestructible element, in the minds of women, which enables them, not indeed to make scientific discoveries, but to exercise the most momentous and salutary influence over the method by which discoveries are made. And as all questions concerning the philosophy of method lie at the very root of our knowledge, I will, in the first place, state, as succinctly as I am able, the only two methods by which we can arrive at truth.

The scientific inquirer, properly so called, that is, he whose object is merely truth, has only two ways of attaining his result. He may proceed from the external world to the internal; or he may begin with the internal and proceed to the external. In the former case he studies the facts presented to his senses, in order to arrive at a true idea of them; in the latter case he studies the ideas already in his mind, in order to explain the facts of which his senses are cognizant. If he begin with the facts his method is inductive; if he begin with the ideas it is deductive. The inductive philosopher collects phenomena

either by observation or by experiment, and from them rises to the general principle or law which explains and covers them. The deductive philosopher draws the principle from ideas already existing in his mind, and explains the phenomena by descending on them, instead of rising from them. Several eminent thinkers have asserted that every idea is the result of induction, and that the axioms of geometry, for instance, are the product of early and unconscious induction. In the same way Mr. Mill, in his great work on *Logic*, affirms that all reasoning is in reality from particular to particular, and that the major premiss of every syllogism is merely a record and register of knowledge previously obtained. Whether this be true, or whether, as another school of thinkers asserts, we have ideas antecedent to experience, is a question which has been hotly disputed, but which I do not believe the actual resources of our knowledge can answer, and certainly I have no intention at present of making the attempt. It is enough to say that we call geometry a deductive science, because, even if its axioms are arrived at inductively, the inductive process is extremely

small, and we are unconscious of it; while the deductive reasonings form the great mass and difficulty of the science.

To bring this distinction home to you, I will illustrate it by a specimen of deductive and inductive investigation of the same subject. Suppose a writer on what is termed social science, wishes to estimate the influence of different habits of thought on the average duration of life, and taking as an instance the opposite pursuits of poets and mathematicians, asks which of them live longest. How is he to solve this? If he proceeds inductively he will first collect the facts, that is, he will ransack the biographies of poets and mathematicians in different ages, different climates, and different states of society, so as to eliminate perturbations arising from circumstances not connected with his subject. He will then throw the results into the statistical form of tables of mortality, and on comparing them will find, that notwithstanding the immense variety of circumstances which he has investigated, there is a general average which constitutes an empirical law, and proves that mathematicians, as a body, are longer

lived than poets. This is the inductive method. On the other hand, the deductive inquirer will arrive at precisely the same conclusion by a totally different method. He will argue thus: poetry appeals to the imagination, mathematics to the understanding. To work the imagination is more exciting than to work the understanding, and what is habitually exciting is usually unhealthly. But what is usually unhealthy will tend to shorten life; therefore poetry tends more than mathematics to shorten life; therefore on the whole poets will die sooner than mathematicians.

You now see the difference between induction and deduction; and you see, too, that both methods are valuable, and that any conclusion must be greatly strengthened if we can reach it by two such different paths. To connect this with the question before us, I will endeavour to establish two propositions. First, That women naturally prefer the deductive method to the inductive. Secondly, That women by encouraging in men deductive habits of thought, have rendered an immense though unconscious service to the progress of knowledge, by preventing scientific investi-

gators from being as exclusively inductive as they would otherwise be.

In regard to women being by nature more deductive, and men more inductive, you will remember that induction assigns the first place to particular facts; deduction to general propositions or ideas. Now, there are several reasons why women prefer the deductive, and, if I may so say, ideal method. They are more emotional, more enthusiastic, and more imaginative than men; they therefore live more in an ideal world; while men, with their colder, harder, and austerer organizations, are more practical and more under the dominion of facts, to which they consequently ascribe a higher importance. Another circumstance which makes women more deductive, is that they possess more of what is called intuition. They cannot see so far as men can, but what they do see they see quicker. Hence, they are constantly tempted to grasp at once at an idea, and seek to solve a problem suddenly, in contradistinction to the slower and more laborious ascent of the inductive investigator.

That women are more deductive than men,

because they think quicker than men, is a proposition which some persons will not relish, and yet it may be proved in a variety of ways. Indeed, nothing could prevent its being universally admitted except the fact, that the remarkable rapidity with which women think is obscured by that miserable, that contemptible, that preposterous system, called their education, in which valuable things are carefully kept from them, and trifling things carefully taught to them, until their fine and nimble minds are too often irretrievably injured. It is on this account, that in the lower classes the superior quickness of women is even more noticeable than in the upper; and an eminent physician, Dr. Currie, mentions in one of his letters, that when a labourer and his wife came together to consult him, it was always from the woman that he gained the clearest and most precise information, the intellect of the man moving too slowly for his purpose. To this I may add another observation which many travellers have made, and which any one can verify: namely, that when you are in a foreign country, and speaking a foreign language, women will under-

stand you quicker than men will; and that for the same reason, if you lose your way in a town abroad, it is always best to apply to a woman, because a man will show less readiness of apprehension.

These, and other circumstances which might be adduced—such, for instance, as the insight into character possessed by women, and the fine tact for which they are remarkable—prove that they are more deductive than men, for two principal reasons. First, Because they are quicker than men. Secondly, Because, being more emotional and enthusiastic, they live in a more ideal world, and therefore prefer a method of inquiry which proceeds from ideas to facts; leaving to men the opposite method of proceeding from facts to ideas.

My second proposition is, that women have rendered great though unconscious service to science, by encouraging and keeping alive this habit of deductive thought; and that if it were not for them, scientific men would be much too inductive, and the progress of our knowledge would be hindered. There are many here who will not willingly admit this

proposition, because in England, since the first half of the seventeenth century, the inductive method, as the means of arriving at physical truths, has been the object, not of rational admiration, but of a blind and servile worship; and it is constantly said, that since the time of Bacon all great physical discoveries have been made by that process. If this be true, then of course the deductive habits of women must, in reference to the progress of knowledge, have done more harm than good. But it is not true. It is not true that the greatest modern discoveries have all been made by induction; and the circumstance of its being believed to be true, is one of many proofs how much more successful Englishmen have been in making discoveries than in investigating the principles according to which discoveries are made.

The first instance I will give you of the triumph of the deductive method, is in the most important discovery yet made respecting the inorganic world; I mean the discovery of the law of gravitation by Sir Isaac Newton. Several of Newton's other discoveries were, no doubt, inductive, in so far as

they merely assumed such provisional and tentative hypotheses as are always necessary to make experiments fruitful. But it is certain that his greatest discovery of all was deductive, in the proper sense of the word; that is to say, the process of reasoning from ideas was out of all proportion large, compared to the process of reasoning from facts. Five or six years after the accession of Charles II., Newton was sitting in a garden, when (you all know this part of the story) an apple fell from a tree. Whether he had been already musing respecting gravitation, or whether the fall of the apple directed his thoughts into that channel is uncertain, and is immaterial to my present purpose, which is merely to indicate the course his mind actually took. His object was to discover some law, that is, rise to some higher truth respecting gravity than was previously known. Observe how he went to work. He sat still where he was, and he thought. He did not get up to make experiments concerning gravitation, nor did he go home to consult observations which others had made, or to collate tables of observations: he did not even continue to watch

the external world, but he sat, like a man entranced and enraptured, feeding on his own mind, and evolving idea after idea. He thought that if the apple had been on a higher tree, if it had been on the highest known tree, it would have equally fallen. Thus far, there was no reason to think that the power which made the apple fall was susceptible of diminution; and if it were not susceptible of diminu tion, why should it be susceptible of limit? If it were unlimited and undiminished, it would extend above the earth; it would reach the moon and keep her in her orbit. If the power which made the apple fall was actually able to control the moon, why should it stop there? Why should not the planets also be controlled, and why should not they be forced to run their course by the necessity of gravitating towards the sun, just as the moon gravitated towards the earth? His mind thus advancing from idea to idea, he was carried by imagination into the realms of space, and still sitting, neither experimenting nor observing, but heedless of the operations of nature, he completed the most sublime and majestic speculation that it ever entered into the heart of man to conceive. Owing to an inaccurate

measurement of the diameter of the earth, the details which verified this stupendous conception were not completed till twenty years later, when Newton, still pursuing the same process, made a deductive application of the laws of Kepler: so that both in the beginning and in the end, the greatest discovery of the greatest natural philosopher the world has yet seen, was the fruit of the deductive method. See how small a part the senses played in that discovery! It was the triumph of the idea! It was the audacity of genius! It was the outbreak of a mind so daring, and yet so subtle, that we have only Shakspeare's with which to compare it. To pretend, therefore, as many have done, that the fall of the apple was the cause of the discovery, and then to adduce that as a confirmation of the idle and superficial saying 'that great events spring from little causes,' only shows how unable such writers are to appreciate what our masters have done for us. No great event ever sprung, or ever will spring, from a little cause; and this, the greatest of all discoveries, had a cause fully equal to the effect produced. The cause of the discovery of the law of gravi-

tation was not the fall of the apple, nor was it anything that occurred in the external world. The cause of the discovery of Newton was the mind of Newton himself.

The next instance I will mention of the successful employment of the *à priori*, or deductive method, concerns the mineral kingdom. If you take a crystallized substance as it is usually found in nature, nothing can at first sight appear more irregular and capricious. Even in its simplest form, the shape is so various as to be perplexing; but natural crystals are generally met with, not in primary forms, but in secondary ones, in which they have a singularly confused and uncouth aspect. These strange-looking bodies had long excited the attention of philosophers, who, after the approved inductive fashion, subjected them to all sorts of experiments; divided them, broke them up, measured them, weighed them, analysed them, thrust them into crucibles, brought chemical agents to bear upon them, and did everything they could think of to worm out the secret of these crystals, and get at their mystery. Still, the mystery was not revealed to them. At length, late in the eighteenth

century, a Frenchman named Haüy, one of the most remarkable men of a remarkable age, made the discovery, and ascertained that these native crystals, irregular as they appear, are in truth perfectly regular, and that their secondary forms deviate from their primary forms by a regular process of diminution; that is, by what he termed laws of decrement—the principles of decrease being as unerring as those of increase. Now, I beg that you will particularly notice how this striking discovery was made. Haüy was essentially a poet; and his great delight was to wander in the *Jardin du Roi*, observing nature, not as a physical philosopher, but as a poet. Though his understanding was strong, his imagination was stronger; and it was for the purpose of filling his mind with ideas of beauty that he directed his attention first to the vegetable kingdom, with its graceful forms and various hues. His poetic temperament luxuriating in such images of beauty, his mind became saturated with ideas of symmetry, and Cuvier assures us that it was in consequence of those ideas that he began to believe that the apparently irregular forms of native crystals

were in reality regular; in other words, that in them, too, there was a beauty—a hidden beauty—though the senses were unable to discern it. As soon as this idea was firmly implanted in his mind, at least half the discovery was made; for he had got the key to it, and was on the right road, which others had missed because, while they approached minerals experimentally on the side of the senses, he approached them speculatively on the side of the idea. This is not a mere fanciful assertion of mine, since Haüy himself tells us, in his great work on Mineralogy, that he took, as his starting point, ideas of the symmetry of form; and that from those ideas he worked down deductively to his subject. It was in this way, and of course after a long series of subsequent labours, that he read the riddle which had baffled his able but unimaginative predecessors. And there are two circumstances worthy of note, as confirming what I have said respecting the real history of this discovery. The first is, that although Haüy is universally admitted to be the founder of the science, his means of observation were so rude that subsequent crystallographers declare

that hardly any of his measurements of angles are correct; as indeed is not surprising, inasmuch as the goniometer which he employed was a very imperfect instrument; and that of Wollaston, which acts by reflection, was not then invented. The other circumstance is, that the little mathematics he once knew he had forgotten amid his poetic and imaginative pursuits; so that, in working out the details of his own science, he was obliged, like a schoolboy, to learn the elements of geometry before he could prove to the world what he had already proved to himself, and could bring the laws of the science of form to bear upon the structure of the mineral kingdom.

To these cases of the application of what may be termed the ideal method to the inorganic world, I will add another from the organic department of nature. Those among you who are interested in botany, are aware that the highest morphological generalization we possess respecting plants, is the great law of metamorphosis, according to which the stamens, pistils, corollas, bracts, petals, and so forth, of every plant, are simply modified leaves. It is now known that these various

parts, different in shape, different in colour, and different in function, are successive stages of the leaf—epochs, as it were, of its history. The question naturally arises, who made this discovery? Was it some inductive investigator, who had spent years in experiments and minute observations of plants, and who, with indefatigable industry, had collected them, classified them, given them hard names, dried them, laid them up in his herbarium that he might at leisure study their structure and rise to their laws? Not so. The discovery was made by Göthe, the greatest poet Germany has produced, and one of the greatest the world has ever seen. And he made it, not in spite of being a poet, but because he was a poet. It was his brilliant imagination, his passion for beauty, and his exquisite conception of form, which supplied him with ideas, from which, reasoning deductively, he arrived at conclusions by descent, not by ascent. He stood on an eminence, and looking down from the heights generalized the law. Then he descended into the plains, and verified the idea. When the discovery was announced by Göthe, the botanists not only

rejected it, but were filled with wrath at the notion of a poet invading their territory. What! a man who made verses and wrote plays, a mere man of imagination, a poor creature who knew nothing of facts, who had not even used the microscope, who had made no great experiments on the growth of plants; was he to enter the sacred precincts of physical science, and give himself out as a philosopher? It was too absurd. But Göthe, who had thrown his idea upon the world, could afford to wait and bide his time. You know the result. The men of facts at length succumbed before the man of ideas; the philosophers, even on their own ground, were beaten by the poet; and this great discovery is now received and eagerly welcomed by those very persons who, if they had lived fifty years ago, would have treated it with scorn, and who even now still go on in their old routine, telling us, in defiance of the history of our knowledge, that all physical discoveries are made by the Baconian method, and that any other method is unworthy the attention of sound and sensible thinkers.

One more instance, and I have done with

this part of the subject. The same great poet made another important physical discovery in precisely the same way. Göthe, strolling in a cemetery near Venice, stumbled on a skull which was lying before him. Suddenly the idea flashed across his mind that the skull was composed of vertebræ; in other words, that the bony covering of the head was simply an expansion of the bony covering of the spine. This luminous idea was afterwards adopted by Oken and a few other great naturalists in Germany and France, but it was not received in England till ten years ago, when Mr. Owen took it up, and in his very remarkable work on the *Homologies of the Vertebrate Skeleton*, showed its meaning and purpose as contributing towards a general scheme of philosophic anatomy. That the discovery was made by Göthe late in the eighteenth century is certain, and it is equally certain that for fifty years afterwards the English anatomists, with all their tools and all their dissections, ignored or despised that very discovery which they are now compelled to accept.

You will particularly observe the circumstances under which this discovery was made.

It was not made by some great surgeon, dissector, or physician, but it was made by a great poet, and amidst scenes most likely to excite a poetic temperament. It was made in Venice, that land so calculated to fire the imagination of a poet; the land of marvels, the land of poetry and romance, the land of painting and of song. It was made, too, when Göthe, surrounded by the ashes of the dead, would be naturally impressed with those feelings of solemn awe, in whose presence the human understanding, rebuked and abashed, becomes weak and helpless, and leaves the imagination unfettered to wander in that ideal world which is its own peculiar abode, and from which it derives its highest aspirations.

It has often seemed to me that there is a striking similarity between this event and one of the most beautiful episodes in the greatest production of the greatest man the world has ever possessed; I mean Shakspeare's *Hamlet*. You remember that wonderful scene in the churchyard, when Hamlet walks in among the graves, where the brutal and ignorant clowns are singing and jeering and jesting over the remains of the dead. You remember how the

fine imagination of the great Danish thinker is stirred by the spectacle, albeit he knows not yet that the grave which is being dug at his feet is destined to contain all that he holds dear upon earth. But though he wists not of this, he is moved like the great German poet, and he, like Göthe, takes up a skull, and his speculative faculties begin to work. Images of decay crowd on his mind as he thinks how the mighty are fallen and have passed away. In a moment, his imagination carries him back two thousand years, and he almost believes that the skull he holds in his hand is indeed the skull of Alexander, and in his mind's eye he contrasts the putrid bone with what it once contained, the brain of the scourge and conqueror of mankind. Then it is that suddenly he, like Göthe, passes into an ideal physical world, and seizing the great doctrine of the indestructibility of matter, that doctrine which in his age it was difficult to grasp, he begins to show how, by a long series of successive changes, the head of Alexander might have been made to subserve the most ignoble purposes; the substance being always metamorphosed, never destroyed. 'Why,' asks Hamlet, 'why may not imagina-

tion trace the noble dust of Alexander?' when, just as he is about to pursue this train of ideas, he is stopped by one of those men of facts, one of those practical and prosaic natures, who are always ready to impede the flight of genius. By his side stands the faithful, the affectionate, but the narrow-minded Horatio, who, looking upon all this as the dream of a distempered fancy, objects that,—''twere to consider too curiously to consider so.' O! what a picture! what a contrast between Hamlet and Horatio; between the idea and the sense; between the imagination and the understanding. ''Twere to consider too curiously to consider so.' Even thus was Göthe troubled by his contemporaries, and thus too often speculation is stopped, genius is chilled, and the play and swell of the human mind repressed, because ideas are made subordinate to facts, because the external is preferred to the internal, and because the Horatios of action discourage the Hamlets of thought.

Much more could I have said to you on this subject, and gladly would I have enlarged on so fruitful a theme as the philosophy of scientific method; a philosophy too much neglected

in this country, but of the deepest interest to those who care to rise above the little instincts of the hour, and who love to inquire into the origin of our knowledge, and into the nature of the conditions under which that knowledge exists. But I fear that I have almost exhausted your patience in leading you into paths of thought which, not being familiar, must be somewhat difficult, and I can hardly hope that I have succeeded in making every point perfectly clear. Still, I do trust that there is no obscurity as to the general results. I trust that I have not altogether raised my voice in vain before this great assembly, and that I have done at least something towards vindicating the use in physical science of that deductive method which, during the last two centuries, Englishmen have unwisely despised. Not that I deny for a moment the immense value of the opposite or inductive method. Indeed, it is impossible for any one standing in this theatre to do so. It is impossible to forget that within the precincts of this building, great secrets have been extorted from nature by induction alone. Under the shadow and protection of this noble Institution, men

of real eminence, men of power and thought have, by a skilful employment of that method, made considerable additions to our knowledge, have earned for themselves the respect of their contemporaries, and well deserve the homage of posterity. To them all honour is due; and I, for one, would say, let that honour be paid freely, ungrudgingly, and with an open and bounteous heart. But I venture to submit that all discoveries have not been made by this, their favourite process. I submit there is a spiritual, a poetic, and for aught we know a spontaneous and uncaused element in the human mind, which ever and anon, suddenly and without warning, gives us a glimpse and a forecast of the future, and urges us to seize truth as it were by anticipation. In attacking the fortress, we may sometimes storm the citadel without stopping to sap the outworks. That great discoveries have been made in this way, the history of our knowledge decisively proves. And if, passing from what has been already accomplished, we look at what remains to be done, we shall find that the necessity of some such plan is likely to become more and more pressing. The field

of thought is rapidly widening, and as the horizon recedes on every side, it will soon be impossible for the mere logical operations of the understanding to cover the whole of that enormous and outlying domain. Already the division of labour has been pushed so far that we are in imminent danger of losing in comprehensiveness more than we gain in accuracy. In our pursuit after special truths, we run no small risk of dwarfing our own minds. By concentrating our attention we are apt to narrow our conceptions, and to miss those commanding views which would be attained by a wider though perhaps less minute survey. It is but too clear that something of this sort has already happened, and that serious mischief has been wrought. For, look at the language and sentiments of those who profess to guide, and who in some measure do guide, public opinion in the scientific world. According to their verdict, if a man does something specific and immediate, if, for instance, he discovers a new acid or a new salt, great admiration is excited, and his praise is loudly celebrated. But when a man like Göthe puts forth some vast and pregnant idea

which is destined to revolutionize a whole department of inquiry, and by inaugurating a new train of thought to form an epoch in the history of the human mind; if it happens, as is always the case, that certain facts contradict that view, then the so-called scientific men rise up in arms against the author of so daring an innovation; a storm is raised about his head, he is denounced as a dreamer, an idle visionary, an interloper in matters which he has not studied with proper sobriety.

Thus it is that great minds are depressed in order that little minds may be raised. This false standard of excellence has corrupted even our language and vitiated the ordinary forms of speech. Among us a theorist is actually a term of reproach, instead of being, as it ought to be, a term of honour; for to theorize is the highest function of genius, and the greatest philosophers must always be the greatest theorists. What makes all this the more serious is, that the further our knowledge advances, the greater will be the need of rising to transcendental views of the physical world. To the magnificent doctrine of the indestructibility of matter, we are now adding the no

less magnificent one of the indestructibility of force; and we are beginning to perceive that, according to the ordinary scientific treatment, our investigations must be confined to questions of metamorphosis and of distribution; that the study of causes and of entities is forbidden to us; and that we are limited to phenomena through which and above which we can never hope to pass. But unless I greatly err, there is something in us which craves for more than this. Surely we shall not always be satisfied, even in physical science, with the cheerless prospect of never reaching beyond the laws of co-existence and of sequence? Surely this is not the be-all and end-all of our knowledge. And yet, according to the strict canons of inductive logic, we can do no more. According to that method, this is the verge and confine of all. Happily, however, induction is only one of our resources. Induction is indeed a mighty weapon laid up in the armoury of the human mind, and by its aid great deeds have been accomplished and noble conquests have been won. But in that armoury there is another weapon, I will not say of a stronger make, but certainly of a keener edge;

and if that weapon had been oftener used during the present and preceding century, our knowledge would be far more advanced than it actually is. If the imagination had been more cultivated, if there had been a closer union between the spirit of poetry and the spirit of science, natural philosophy would have made greater progress, because natural philosophers would have taken a higher and more successful aim, and would have enlisted on their side a wider range of human sympathies.

From this point of view you will see the incalculable service women have rendered to the progress of knowledge. Great and exclusive as is our passion for induction, it would, but for them, have been greater and more exclusive still. Empirical as we are, slaves as we are to the tyranny of facts, our slavery would, but for them, have been more complete and more ignominious. Their turn of thought, their habits of mind, their conversation, their influence, insensibly extending over the whole surface of society, and frequently penetrating its intimate structure, have, more than all other things put together, tended to raise us into an ideal world, lift us

from the dust in which we are too prone to grovel, and develop in us those germs of imagination which even the most sluggish and apathetic understandings in some degree possess. The striking fact that most men of genius have had remarkable mothers, and that they have gained from their mothers far more than from their fathers; this singular and unquestionable fact can, I think, be best explained by the principles which I have laid down. Some, indeed, will tell you that this depends upon laws of the hereditary transmission of character from parent to child. But if this be the case, how comes it that while every one admits that remarkable men have usually remarkable mothers, it is not generally admitted that remarkable men have usually remarkable fathers? If the intellect is bequeathed on one side, why is it not bequeathed on the other? For my part, I greatly doubt whether the human mind is handed down in this way, like an heir-loom, from one generation to another. I rather believe that, in regard to the relation between men of genius and their mothers, the really important events occur after birth, when the habits of thought

peculiar to one sex act upon and improve the habits of thought peculiar to the other sex. Unconsciously, and from a very early period, there is established an intimate and endearing connexion between the deductive mind of the mother and the inductive mind of her son. The understanding of the boy, softened and yet elevated by the imagination of his mother, is saved from that degeneracy towards which the mere understanding always inclines; it is saved from being too cold, too matter-of-fact, too prosaic, and the different properties and functions of the mind are more harmoniously developed than would otherwise be practicable. Thus it is that by the mere play of the affections the finished man is ripened and completed. Thus it is that the most touching and the most sacred form of human love, the purest, the highest, and the holiest compact of which our nature is capable, becomes an engine for the advancement of knowledge and the discovery of truth. In after life other relations often arise by which the same process is continued. And notwithstanding a few exceptions, we do undoubtedly find that the most truly eminent men have had not only their

affections, but also their intellect, greatly influenced by women. I will go even farther; and I will venture to say that those who have not undergone that influence betray a something incomplete and mutilated. We detect even in their genius a certain frigidity of tone; and we look in vain for that burning fire, that gushing and spontaneous nature with which our ideas of genius are indissolubly associated. Therefore it is that those who are most anxious that the boundaries of knowledge should be enlarged, ought to be most eager that the influence of women should be increased, in order that every resource of the human mind may be at once and quickly brought into play. For you may rely upon it that the time is approaching when all those resources will be needed, and will be taxed even to the utmost. We shall soon have on our hands work far more arduous than any we have yet accomplished; and we shall be encountered by difficulties the removal of which will require every sort of help, and every variety of power. As yet we are in the infancy of our knowledge. What we have done is but a speck compared to what remains to be done. For what is

there that we really know? We are too apt to speak as if we had penetrated into the sanctuary of truth and raised the veil of the goddess, when in fact we are still standing, coward-like, trembling before the vestibule, and not daring from very fear to cross the threshold of the temple. The highest of our so-called laws of nature are as yet purely empirical. You are startled by that assertion; but it is literally true. Not one single physical discovery that has ever been made has been connected with the laws of the mind that made it; and until that connexion is ascertained our knowledge has no sure basis. On the one side we have mind; on the other side we have matter. These two principles are so interwoven, they so act upon and perturb each other, that we shall never really know the laws of one unless we also know the laws of both. Everything is essential; everything hangs together, and forms part of one single scheme, one grand and complex plan, one gorgeous drama of which the universe is the theatre. They who discourse to you of the laws of nature as if those laws were binding on nature, or as if they formed a part of nature, deceive both you

and themselves. The laws of nature have their sole seat, origin, and function in the human mind. They are simply the conditions under which the regularity of nature is recognised. They explain the external world, but they reside in the internal. As yet we know scarcely anything of the laws of mind, and therefore we know scarcely anything of the laws of nature. Let us not be led away by vain and high-sounding words. We talk of the law of gravitation, and yet we know not what gravitation is; we talk of the conservation of force and distribution of forces, and we know not what forces are; we talk with complacent ignorance of the atomic arrangements of matter, and we neither know what atoms are nor what matter is; we do not even know if matter, in the ordinary sense of the word, can be said to exist; we have as yet only broken the first ground, we have but touched the crust and surface of things. Before us and around us there is an immense and untrodden field, whose limits the eye vainly strives to define; so completely are they lost in the dim and shadowy outline of the future. In that field, which we and our posterity have

yet to traverse, I firmly believe that the imagination will effect quite as much as the understanding. Our poetry will have to reinforce our logic, and we must feel as much as we must argue. Let us, then, hope that the imaginative and emotional minds of one sex will continue to accelerate the great progress, by acting upon and improving the colder and harder minds of the other sex. By this coalition, by this union of different faculties, different tastes, and different methods, we shall go on our way with the greater ease. A vast and splendid career lies before us, which it will take many ages to complete. We see looming in the distance a rich and goodly harvest, into which perchance some of us may yet live to thrust our sickle, but of which, reap what we may, the greatest crop of all must be reserved for our posterity. So far, however, from desponding, we ought to be sanguine. We have every reason to believe that when the human mind once steadily combines the whole of its powers, it will be more than a match for the difficulties presented by the external world. As we surpass our fathers, so will our children surpass us. We, waging

against the forces of nature what has too often been a precarious, unsteady, and unskilled warfare, have never yet put forth the whole of our strength, and have never united all our faculties against our common foe. We, therefore, have been often worsted, and have sustained many and grievous reverses. But even so, such is the elasticity of the human mind, such is the energy of that immortal and god-like principle which lives within us, that we are baffled without being discouraged, our very defeats quicken our resources, and we may hope that our descendants, benefiting by our failure, will profit by our example, and that for them is reserved that last and decisive stage of the great conflict between Man and Nature, in which, advancing from success to success, fresh trophies will be constantly won, every struggle will issue in a conquest, and every battle end in a victory.

THE END.